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A TABLE OF THE INVERSE SINE-AMPLITUDE FUNCTION IN THE COMPLEX DOMAIN

HENRY E. FETTIS

JAMES C. CASLIN

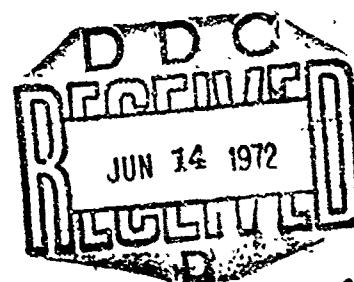
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13 ABSTRACT

Let $z = \operatorname{sn}(w, k)$ be the Jacobian sine-amplitude function as defined, e.g. in [1]. The tables list five-D values of the quantity $w = u + iv$ where z is given by $z = a + ib$, for the following values

$$\begin{aligned}
 a &= 0(.1)1 & b &= 0(.1)1 \\
 a &= .9(.01)1 & b &= 0(.1)1 \\
 a &= 0(.1)1 & \frac{1}{b} &= .01(.01).1 \\
 a &= 0(.1)1 & \frac{1}{b} &= .1(.1)1 \\
 \frac{1}{a} &= .01(.01).1 & b &= 0(.1)1 \\
 \frac{1}{a} &= .1(.1)1 & b &= 0(.1)1 \\
 \frac{1}{a} &= .01(.01).1 & \frac{1}{b} &= .01(.01).1 \\
 \frac{1}{a} &= .1(.1)1 & \frac{1}{b} &= .1(.1)1
 \end{aligned}$$

The values of u and v are expressed as decimal portions of the quarter-periods K and K' respectively. The modulus is given in the form $k = \sin \theta$, with $\theta = 5^\circ (5^\circ) 85^\circ (1^\circ) 89^\circ$.

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| Elliptic functions | | | | | | |
| Conformal mapping | | | | | | |

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**A TABLE OF THE INVERSE SINE-AMPLITUDE
FUNCTION IN THE COMPLEX DOMAIN**

HENRY E. FETTIS

JAMES C. CASLIN

APPLIED MATHEMATICS RESEARCH LABORATORY

APRIL 1972

PROJECT 7071

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AEROSPACE RESEARCH LABORATORIES
AIR FORCE SYSTEMS COMMAND
UNITED STATES AIR FORCE
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

FOREWORD

The present tables were prepared by the Applied Mathematics Research Laboratory of Aerospace Research Laboratories, under Project No. 7071. The computations were initiated by Mr. Henry E. Fettis, and carried out by Mr. James C. Caslin on the CDC 6600 electronic digital computer.

ABSTRACT

Let $z = \text{sn}(w, k)$ be the Jacobian sine-amplitude function as defined, e.g. in [1]. The tables list five-D values of the quantity $w = u + iv$ where z is given by $z = a + ib$, for the following values

$$a = 0(.1)1 \quad ; \quad b = 0(.1)1$$

$$a = .9(.01)1 \quad ; \quad b = 0(.1)1$$

$$a = 0(.1)1 \quad ; \quad \frac{1}{b} = .01(.01).1$$

$$a = 0(.1)1 \quad ; \quad \frac{1}{b} = .1(.1)1$$

$$\frac{1}{a} = .01(.01).1 \quad ; \quad b = 0(.1)1$$

$$\frac{1}{a} = .1(.1)1 \quad ; \quad b = 0(.1)1$$

$$\frac{1}{a} = .01(.01).1 \quad ; \quad \frac{1}{b} = .01(.01).1$$

$$\frac{1}{a} = .1(.1)1 \quad ; \quad \frac{1}{b} = .1(.1)1$$

The values of u and v are expressed as decimal portions of the quarter-periods K and K' respectively. The modulus is given in the form $k = \sin \theta$, with $\theta = 5^\circ(5^\circ)85^\circ(1^\circ)89^\circ$.

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INTRODUCTION

The Jacobian elliptic functions with complex argument occur primarily in problems of conformal mapping (see, e.g. [4]). Tabulated values of these functions can be found in [2] and [3]. Frequently it is desirous to know the inverse function, for example, to find w if $\text{sn}(w)$ is given. This would require interpolation in two variables, which is both inconvenient and inaccurate, particularly in some regions where a small change in the argument results in a large change in the function. The charts in [2] can be employed to obtain qualitatively correct values of the inverse function, but to date no explicit tabulation is known.

The present tables give values of the inverse sine-amplitude function $w = u + iv$ for values of a and b which cover the entire first quadrant of the $a + ib$ plane. The quantities u and v are expressed in the form u/K and v/K' where $K = K(k)$ and $K' = K(k')$ are the complete elliptic integrals with modulus k and $k' = \sqrt{1 - k^2}$, respectively. These quantities define the quarter-periods of the corresponding elliptic functions.

THE ADDITION FORMULA FOR THE INVERSE SINE-AMPLITUDE FUNCTION

Since by definition

$$v + iv = \text{sn}^{-1}(a + ib) = F(\psi, k) \quad (1)$$

where

$$a + ib = \sin(\psi) = \sin(\theta + i\phi), \quad (2)$$

the problem of obtaining the inverse sine-amplitude function is actually equivalent to computing the elliptic integral with complex amplitude. This could of course be accomplished directly either by series or reduction of modulus. However, a simpler method can be derived by using the addition formula for the amplitude function.

We have, considering first the case of real argument,

$$\psi = \theta + \phi = \operatorname{am}(u+v) \quad (3)$$

and by the addition formula [1]

$$\tan \theta = \operatorname{tn} u \operatorname{dn} v \quad (4)$$

$$\tan \phi = \operatorname{tn} v \operatorname{dn} u$$

where the modulus of the elliptic functions is k .

Eliminating successively $\operatorname{sn} u$ and $\operatorname{sn} v$ between Eqs (4) we get

$$k^2 \cos^2 \phi \operatorname{sn}^4 u - [1 + k^2 (\sin^2 \theta \cos^2 \phi - \cos^2 \theta \sin^2 \phi)] \operatorname{sn}^2 u + \sin^2 \theta = 0 \quad (5)$$

$$k^2 \cos^2 \theta \operatorname{sn}^4 v - [1 + k^2 (\cos^2 \theta \sin^2 \phi - \sin^2 \theta \cos^2 \phi)] \operatorname{sn}^2 v + \sin^2 \phi = 0$$

Solving gives

$$\operatorname{sn} u = \frac{\sqrt{(1 + k \sin \theta \cos \phi)^2 - k^2 \cos^2 \theta \sin^2 \phi} - \sqrt{(1 - k \sin \theta \cos \phi)^2 - k^2 \cos^2 \theta \sin^2 \phi}}{2k \operatorname{ccs} \phi} \quad (6)$$

$$\operatorname{sn} v = \frac{\sqrt{(1 + k \cos \theta \sin \phi)^2 - k^2 \sin^2 \theta \cos^2 \phi} - \sqrt{(1 - k \cos \theta \sin \phi)^2 - k^2 \sin^2 \theta \cos^2 \phi}}{2k \cos \theta}$$

Making use of Eq. 2 and the result

$$\begin{aligned}\cos \theta &= \frac{1}{2} \{ \sqrt{(1+b)^2 - a^2} + \sqrt{(1-b)^2 - a^2} \}, \\ \cos \phi &= \frac{1}{2} \{ \sqrt{(1+a)^2 - b^2} + \sqrt{(1-a)^2 - b^2} \},\end{aligned}\tag{7}$$

Eqs. 6 may be written explicitly in terms of a and b .

In the case of complex argument v is replaced by iv , ϕ by $i\phi$, and b by ib . The first equation 6 becomes

$$\begin{aligned}\operatorname{sn}(u, k) &= \frac{\sqrt{(1+ka)^2 + (kb)^2} - \sqrt{(1-ka)^2 + (kb)^2}}{2k \cosh \phi} \\ &= \frac{\sqrt{(1+a)^2 + (b)^2} - \sqrt{(1-a)^2 + (b)^2}}{\sqrt{(1+ka)^2 + (kb)^2} + \sqrt{(1-ka)^2 + (kb)^2}}\end{aligned}\tag{8}$$

while the imaginary part is more easily calculated from the second Eq. 4, after using the transformation $\operatorname{tn}(iv, k) = \operatorname{sn}(v, k')$

$$\operatorname{sn}(v, k') = \frac{\tanh \phi}{\sqrt{1 - k'^2 \operatorname{sn}^2 u}}\tag{9}$$

With $\operatorname{sn}(u, k)$ and $\operatorname{sn}(v, k')$ known it is easy to find u and v by the conventional method of modulus reduction from the formulae

$$u = F(\alpha, k)$$

$$v = F(\beta, k')$$

where $\sin \alpha = \operatorname{sn} u$, $\sin \beta = \operatorname{sn} v$.

In the case where $b = 0$, Eqs. 8 and 9 simplify to

$$\begin{aligned} \operatorname{sn}(u, k) &= \frac{(1 + ka) - |1 - ka|}{2k \cosh \phi} \\ \operatorname{sn}(v, k') &= \frac{\tanh \phi}{\sqrt{1 - k^2 \operatorname{sn}^2 u}} \quad (10) \\ \cosh \phi &= \frac{1}{2}[(1 + a) + |1 - a|] \end{aligned}$$

If $a < 1$, the above equations give

$$\phi = 0$$

$$\operatorname{sn}(u, k) = a \quad (11)$$

$$\operatorname{sn}(v, k) = 0$$

and

$$u + iv = F(\sin^{-1} a, k). \quad (12)$$

If $a > 1$ and $ka \geq 1$, we obtain

$$\cosh \phi = a$$

$$\tanh \phi = \sqrt{a^2 - 1/a} \quad (13)$$

$$\operatorname{sn}(u, k) = 1/ka$$

$$\operatorname{sn}(v, k') = 1.$$

Hence

$$u + iv = F[\sin^{-1}(1/ka), k] + iK'(k). \quad (14)$$

Finally if $a > 1$ and $ka \leq 1$

$$\cosh \phi = a$$

$$\operatorname{sn}(u, k) = 1 \quad (15)$$

$$\operatorname{sn}(v, k') = \sqrt{a^2 - 1/ak'}$$

and

$$u + iv = K(k) + iF(\sqrt{a^2 - 1/ak'}, k'). \quad (16)$$

If $ka = 1$, both Eqs. 14 and 16 give

$$u + iv = K(k) + iK'(k) \quad (17)$$

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- [1] Byrd, P. F. and Friedman, M. D., "Handbook of Elliptic Integrals for Engineers and Physicists", Springer (1954, 1971).
- [2] Fettis, Henry E. and Caslin, James C., "Elliptic Functions for Complex Arguments", ARL TR 67-0001 (Jan 1967).
- [3] Henderson, F. M., "Elliptic Functions with Complex Arguments", University of Michigan Press (1960).
- [4] Kober, H., "Dictionary of Conformal Representations", Dover (1952).

$$J + IV = SN \quad (A + TB)$$

5 SIN X

| B | A=0.00 | A=.10 | A=.20 | A=.30 | A=.40 | A=.50 | A=.60 | A=.70 | A=.80 | A=.90 | A=1.00 |
|------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 0.00 | 0.00000 | .06365 | .12795 | .19363 | .26154 | .33281 | .40905 | .49303 | .58975 | .71235 | 1.00000 |
| | 0.00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .10 | 0.00000 | .06333 | .12726 | .19253 | .25919 | .33038 | .40542 | .46711 | .57879 | .68517 | .79997 |
| | 0.02605 | .02618 | .02659 | .02730 | .02810 | .03003 | .03244 | .03617 | .04244 | .05484 | .06350 |
| .20 | 0.00000 | .06239 | .12532 | .18936 | .25518 | .32352 | .39530 | .47152 | .55294 | .63825 | .71956 |
| | .05185 | .05210 | .05287 | .05423 | .05630 | .05932 | .06367 | .07007 | .07985 | .09531 | .11696 |
| .30 | 0.00000 | .06091 | .12225 | .18445 | .24737 | .31326 | .38072 | .46052 | .52211 | .59335 | .65965 |
| | .07716 | .07750 | .07858 | .08045 | .08328 | .08731 | .09294 | .10079 | .11175 | .12667 | .14670 |
| .40 | 0.00000 | .05901 | .11632 | .17822 | .23898 | .30073 | .36370 | .42745 | .49110 | .55314 | .61071 |
| | .10177 | .10219 | .10349 | .10574 | .10908 | .11374 | .12005 | .12844 | .13941 | .15342 | .17048 |
| .50 | 0.00000 | .05601 | .11380 | .17113 | .22831 | .28716 | .34574 | .40424 | .46164 | .51729 | .56900 |
| | .12555 | .12602 | .12746 | .12994 | .13356 | .13855 | .14510 | .15349 | .16395 | .17677 | .19173 |
| .60 | 0.00000 | .05443 | .10693 | .16357 | .21834 | .27315 | .32760 | .38184 | .43460 | .48519 | .53260 |
| | .14639 | .14829 | .15040 | .15299 | .15675 | .16189 | .16830 | .17641 | .18626 | .19768 | .21117 |
| .70 | 0.00000 | .05196 | .10392 | .15586 | .20770 | .25931 | .31043 | .36067 | .40951 | .45629 | .50034 |
| | .17023 | .17074 | .17228 | .17469 | .17863 | .18360 | .18968 | .19757 | .20672 | .21730 | .22922 |
| .80 | 0.00000 | .04949 | .09892 | .14922 | .19728 | .24593 | .29391 | .34069 | .38646 | .43014 | .47144 |
| | .19107 | .19157 | .19309 | .19565 | .19929 | .20408 | .21005 | .21726 | .22572 | .23537 | .24613 |
| .90 | 0.00000 | .04707 | .09405 | .14083 | .18727 | .23319 | .27637 | .32252 | .35531 | .40636 | .44535 |
| | .21090 | .21139 | .21286 | .21532 | .21892 | .22336 | .22899 | .23571 | .24350 | .25213 | .26210 |
| 1.00 | 0.00000 | .04474 | .05937 | .13376 | .17776 | .22119 | .26386 | .30551 | .34588 | .38468 | .42165 |
| | .23022 | .23163 | .23398 | .23729 | .24157 | .24683 | .25337 | .26025 | .26683 | .27725 | |

$U/K + IV/K'$
 -1
 $U+IV=SN^- (A+18)$

| K=SIN 10 | | | | | | | | | | |
|----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | A=0.10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A=1.00 |
| 0.00 | 0.00000 | *06329 | *12724 | *19259 | *26020 | *33123 | *40733 | *49120 | *58799 | *71095 |
| | 0.00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .10 | 0.00000 | *05296 | *12655 | *19147 | *25053 | *32877 | *40362 | *48521 | *57692 | *68350 |
| | 0.03166 | .03182 | .03272 | .03321 | .03457 | .03659 | .03950 | .04419 | .05194 | .06724 |
| .20 | 0.00000 | *06200 | *12456 | *18826 | *25375 | *32181 | *39336 | *46944 | *55076 | *63612 |
| | 0.06300 | .06331 | .06426 | .06595 | .06852 | .07226 | .07766 | .08555 | .09768 | .11678 |
| .30 | 0.00000 | *06050 | *12144 | *18326 | *24642 | *31133 | *37857 | *44815 | *51958 | *59070 |
| | .09372 | .09416 | .09549 | .09762 | .10133 | .10634 | .11332 | .12305 | .13662 | .15534 |
| .40 | 0.00000 | *05857 | *11744 | *17692 | *23728 | *29872 | *36129 | *42474 | *48821 | *54993 |
| | .12359 | .12412 | .12573 | .12852 | .13268 | .13648 | .14631 | .15672 | .17034 | .18770 |
| .50 | 0.00000 | *05633 | *11204 | *16970 | *22703 | *28486 | *34304 | *40115 | *45840 | *51352 |
| | .15242 | .15300 | .15480 | .15789 | .16241 | .16660 | .17674 | .18717 | .20023 | .21611 |
| .60 | 0.00000 | *05390 | *10768 | *16200 | *21627 | *27060 | *32477 | *37836 | *43066 | *48084 |
| | .18007 | .18070 | .18259 | .18582 | .19050 | .19679 | .20486 | .21498 | .22724 | .24172 |
| .70 | 5.00000 | *05138 | *10276 | *15413 | *20542 | *25643 | *30706 | *35677 | *40509 | *45136 |
| | .20649 | .20713 | .20905 | .21230 | .21697 | .22317 | .23101 | .24060 | .25201 | .26522 |
| .80 | 0.00000 | *04886 | *9766 | *14634 | *19477 | *24281 | *29018 | *33657 | *38154 | *42462 |
| | .23165 | .23228 | .23418 | .23738 | .24193 | .24791 | .25536 | .26439 | .27495 | .28702 |
| .90 | 0.00000 | *04638 | *99267 | *13877 | *18453 | *22978 | *27428 | *31776 | *35988 | *40027 |
| | .25556 | .25617 | .25801 | .26110 | .26547 | .27116 | .27620 | .28661 | .29637 | .30743 |
| 1.00 | 0.00000 | *04400 | *8788 | *13152 | *17478 | *21748 | *25941 | *30032 | *33995 | *37801 |
| | .27624 | .27883 | .28059 | .28353 | .28768 | .29395 | .29965 | .30747 | .31649 | .33784 |

$U/K + IV/K'$
 -1
 $I+IV=SN$ ($A+\gamma$)

K=SIN 15

| | | $A = 0.00$ | $A = .10$ | $A = .20$ | $A = .30$ | $A = .40$ | $A = .50$ | $A = .60$ | $A = .70$ | $A = .80$ | $A = .90$ | $A = 1.00$ |
|------|---------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 0.00 | 0.00000 | .06266 | .12605 | .19085 | .25797 | .32857 | .40439 | .46812 | .56502 | .70850 | 1.00000 | .00000 |
| | 0.00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .10 | 0.00000 | .06235 | .12535 | .18371 | .25626 | .32607 | .40060 | .48201 | .57376 | .68067 | .79641 | .11695 |
| | .03606 | .03684 | .03789 | .03950 | .04184 | .04539 | .05080 | .05986 | .07775 | | | |
| .20 | 0.00000 | .06137 | .12331 | .18641 | .25136 | .31695 | .39012 | .46592 | .54714 | .63251 | .71400 | .16908 |
| | .07175 | .07211 | .07324 | .07523 | .07826 | .08267 | .08902 | .09834 | .11252 | .13490 | | |
| .30 | 0.00000 | .05983 | .12010 | .18129 | .24385 | .30821 | .37499 | .44417 | .51530 | .58620 | .65222 | |
| | .10671 | .10722 | .10880 | .11155 | .11569 | .12159 | .12992 | .14127 | .15722 | .17921 | .20804 | |
| .40 | 0.00000 | .05784 | .11600 | .17476 | .23447 | .29521 | .35728 | .42021 | .48321 | .54451 | .60145 | |
| | .14066 | .14128 | .14319 | .14649 | .15140 | .15824 | .16748 | .17975 | .19580 | .21626 | .24120 | |
| .50 | 0.00000 | .05554 | .11127 | .16736 | .22335 | .28106 | .33825 | .39602 | .45265 | .50716 | .55794 | |
| | .17336 | .17407 | .17620 | .17985 | .18520 | .19251 | .20213 | .21445 | .22987 | .24863 | .27062 | |
| .60 | 0.00000 | .05304 | .10616 | .15344 | .21286 | .26640 | .31970 | .37258 | .42414 | .47355 | .51977 | |
| | .20471 | .20545 | .20769 | .21151 | .21705 | .22451 | .23408 | .24603 | .26055 | .27770 | .29732 | |
| .70 | 0.00000 | .05044 | .10089 | .15133 | .20170 | .25185 | .30153 | .35035 | .39777 | .44314 | .48576 | |
| | .23458 | .23533 | .23761 | .24147 | .24701 | .25435 | .26365 | .27502 | .28856 | .30424 | .32192 | |
| .80 | 0.00000 | .04784 | .09562 | .14529 | .19072 | .23774 | .28411 | .32949 | .37345 | .41550 | .45515 | |
| | .26295 | .26370 | .26595 | .26975 | .27516 | .28227 | .29113 | .30183 | .31439 | .32876 | .34480 | |
| .90 | 0.00000 | .04528 | .09047 | .13547 | .18013 | .22428 | .26768 | .31004 | .35103 | .39027 | .42739 | |
| | .28984 | .29056 | .29275 | .29542 | .30162 | .30839 | .31677 | .32678 | .33941 | .35160 | .36622 | |
| 1.00 | 0.00000 | .04282 | .08552 | .12797 | .17005 | .21155 | .25227 | .29197 | .33036 | .36735 | .40207 | |
| | .31527 | .31597 | .31666 | .32157 | .32651 | .33291 | .34077 | .35009 | .36066 | .37299 | .38638 | |

$U/K + IV/K'$
 $U+IV=SN^{-1}$ (A+(B))

K=SIN 20

| | | A= 0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|----|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 10 | 0.00 | 0.00000 | .06164 | .12439 | .18141 | .25454 | .32486 | .40023 | .48374 | .58077 | .70499 | 1.00000 |
| | 0.00 | 0.00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| | .10 | 0.00000 | .66150 | .12366 | .18724 | .25308 | .32227 | .39633 | .47748 | .56924 | .67653 | .79315 |
| | .03985 | .04007 | .04076 | .04197 | .04393 | .04657 | .05062 | .05685 | .06729 | .08776 | .13435 | |
| | .20 | 0.00000 | .06068 | .12155 | .18183 | .24602 | .31493 | .38554 | .46094 | .54195 | .62730 | .70888 |
| | .07927 | .07969 | .08100 | .08330 | .08681 | .09190 | .09923 | .10997 | .12630 | .15201 | .19127 | |
| | .30 | 0.00000 | .05889 | .11825 | .17154 | .24027 | .30393 | .36995 | .43356 | .50922 | .57973 | .64539 |
| | .11785 | .11844 | .12026 | .12345 | .12825 | .13507 | .14458 | .15780 | .17620 | .20156 | .23481 | |
| | .40 | 0.00000 | .05684 | .11401 | .17182 | .23058 | .29051 | .35168 | .41385 | .47614 | .53675 | .59239 |
| | .15526 | .15598 | .15819 | .16201 | .16770 | .17561 | .18631 | .20050 | .21906 | .24273 | .27160 | |
| 10 | .50 | 0.00000 | .05445 | .10911 | .16415 | .21970 | .27580 | .33232 | .38885 | .44455 | .49612 | .54793 |
| | .19124 | .19205 | .19451 | .19874 | .20494 | .21341 | .22456 | .23884 | .25671 | .27847 | .30400 | |
| | .60 | 0.00000 | .05187 | .10383 | .15595 | .20824 | .26063 | .31269 | .36458 | .41502 | .46327 | .50820 |
| | .22562 | .22647 | .22967 | .23350 | .23993 | .24657 | .25968 | .27355 | .29041 | .31034 | .33319 | |
| | .70 | 0.00000 | .04916 | .09837 | .14755 | .19667 | .24555 | .29398 | .34153 | .38765 | .43167 | .47288 |
| | .25829 | .25917 | .26181 | .26629 | .27271 | .28124 | .29204 | .30525 | .32099 | .33925 | .35987 | |
| | .80 | 0.00000 | .04645 | .09292 | .15922 | .20529 | .23094 | .27592 | .31988 | .36237 | .40291 | .44097 |
| | .28923 | .29010 | .29271 | .29712 | .30341 | .31165 | .32106 | .33441 | .34903 | .36578 | .38450 | |
| | .90 | 0.00000 | .04364 | .08758 | .13112 | .17431 | .21697 | .25886 | .29967 | .33906 | .37663 | .41201 |
| | .31845 | .31929 | .32183 | .32609 | .33213 | .34000 | .34974 | .35136 | .37493 | .39031 | .40739 | |
| | 1.00 | 0.00000 | .04129 | .08244 | .12335 | .16395 | .20377 | .24287 | .28090 | .31756 | .35256 | .39560 |
| | | .34679 | .34922 | .35329 | .35903 | .36645 | .37560 | .38645 | .39898 | .41312 | .42876 | |

$U/K + IV/K$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN/25

| | | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A=1.00 |
|------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| 0.00 | 0.00000 | .05076 | .12226 | .1628 | .25079 | .32003 | .39480 | .47801 | .57516 | .70031 | 1.00000 | 1.00000 |
| | 0.00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .10 | 0.00000 | .06040 | .12150 | .18406 | .24816 | .31735 | .39077 | .47153 | .56320 | .67114 | .78873 | .15123 |
| | .04323 | .04348 | .04426 | .04565 | .04778 | .05092 | .05555 | .06266 | .07455 | .09783 | | |
| .20 | 0.00000 | .05935 | .11932 | .18053 | .24373 | .30975 | .37960 | .45443 | .53510 | .62035 | .70194 | |
| | .06596 | .06644 | .06794 | .09057 | .09458 | .10041 | .10680 | .12107 | .13972 | .16905 | .21382 | |
| .30 | 0.00000 | .05770 | .11589 | .17505 | .23569 | .29834 | .36345 | .43125 | .50122 | .57113 | .63617 | |
| | .12773 | .12841 | .13049 | .13414 | .13963 | .14744 | .15833 | .17345 | .19452 | .22354 | .26163 | |
| .40 | 0.00000 | .05557 | .11149 | .16808 | .22564 | .28443 | .34450 | .40562 | .46690 | .52650 | .58165 | |
| | .16816 | .16398 | .17151 | .17589 | .18240 | .19146 | .20371 | .21998 | .24125 | .26640 | .30153 | |
| .50 | 0.00000 | .05310 | .10642 | .16012 | .21436 | .26917 | .32441 | .37966 | .43407 | .48630 | .53465 | |
| | .20695 | .20787 | .21069 | .21553 | .22254 | .23234 | .24511 | .26149 | .28203 | .30700 | .33639 | |
| .60 | 0.00000 | .05042 | .10094 | .15162 | .20246 | .25345 | .30424 | .35445 | .40336 | .44999 | .49324 | |
| | .24391 | .24689 | .24786 | .25293 | .26029 | .27018 | .28292 | .29882 | .31818 | .34109 | .36741 | |
| .70 | 0.00000 | .04764 | .09529 | .14293 | .19048 | .23780 | .28461 | .33050 | .37489 | .41707 | .45628 | |
| | .27893 | .27993 | .28294 | .28807 | .29542 | .30519 | .31754 | .33269 | .35075 | .37173 | .39546 | |
| .80 | 0.00000 | .04485 | .08964 | .13430 | .17669 | .22265 | .26588 | .30803 | .34863 | .38714 | .42202 | |
| | .31196 | .31295 | .31593 | .32097 | .32815 | .33757 | .34937 | .36362 | .38037 | .3956 | .42109 | |
| .90 | 0.00000 | .04211 | .08413 | .12592 | .16734 | .20813 | .24822 | .28710 | .32445 | .35986 | .39291 | |
| | .34302 | .34398 | .34688 | .35174 | .35863 | .36760 | .37872 | .39203 | .40752 | .42512 | .44468 | |
| 1.00 | 0.00000 | .03948 | .07683 | .11790 | .15655 | .19456 | .23169 | .26768 | .30221 | .33494 | .36555 | |
| | .37216 | .37308 | .37565 | .38048 | .38702 | .39548 | .40589 | .41826 | .43254 | .44868 | .46652 | |

$U/K \approx IV/K$
 -1
 $U+IV=SN$ (A+IB)

K=SIN 30

| B | A=0.00 | A=.10 | A=.20 | A=.30 | A=.40 | A=.50 | A=.60 | A=.70 | A=.80 | A=.90 | A=1.00 |
|------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| 0.00 | 0.00000 0.00000 | .05944 .00000 | .11965 .00000 | .16144 .00000 | .24581 .00000 | .31406 .00000 | .38806 .00000 | .47082 .00000 | .56607 .00000 | .69432 .00000 | 1.00000 .00000 |
| .10 | 0.00000 .04627 | .05907 .04656 | .11887 .04745 | .16017 .04902 | .24392 .05145 | .31127 .05501 | .38387 .06028 | .46409 .06837 | .55574 .06189 | .66416 .10830 | .78294 .16874 |
| .20 | 0.00000 .09193 | .05798 .09253 | .11660 .09423 | .17651 .09722 | .23848 .10178 | .30331 .10841 | .37226 .11795 | .44632 .13192 | .52647 .15314 | .61146 .18653 | .69286 .23752 |
| .30 | 0.00000 .13660 | .05627 .13737 | .11304 .13974 | .17062 .14368 | .23013 .15011 | .29152 .15899 | .35546 .17138 | .42220 .18860 | .49120 .21260 | .56018 .24571 | .62418 .28925 |
| .40 | 0.00000 .17970 | .05407 .18064 | .10844 .16350 | .16359 .16847 | .21971 .20615 | .27707 .22008 | .33576 .23859 | .39553 .26284 | .45544 .29383 | .51360 .33187 | .56711 .33187 |
| .50 | 0.00000 .22095 | .05151 .22199 | .10323 .22518 | .15535 .23067 | .20801 .23872 | .26124 .24973 | .31499 .26423 | .36853 .26205 | .42124 .30620 | .47163 .33471 | .51790 .36832 |
| .60 | 0.00000 .26012 | .04874 .26123 | .09757 .26458 | .14656 .27032 | .19771 .27664 | .24493 .2896+ | .29397 .30428 | .34235 .32232 | .38930 .34431 | .43360 .37039 | .47465 .40038 |
| .70 | 0.00000 .29709 | .04507 .29522 | .09174 .30162 | .13758 .30740 | .18332 .31570 | .22877 .32673 | .27366 .34070 | .31754 .35783 | .35978 .37829 | .39961 .40207 | .43622 .42900 |
| .80 | 0.00000 .33183 | .04300 .33294 | .08593 .33630 | .12870 .34197 | .17118 .35004 | .21316 .36066 | .25434 .37394 | .29434 .39001 | .33265 .40890 | .36867 .43057 | .40102 .45484 |
| .90 | 0.00000 .36435 | .04019 .36543 | .08027 .36867 | .12010 .37412 | .15952 .38185 | .19831 .39192 | .23620 .40440 | .27283 .41933 | .30779 .43671 | .34063 .45646 | .37088 .47839 |
| 1.00 | 0.00000 .39472 | .03749 .39575 | .07485 .39684 | .11190 .40401 | .14848 .41131 | .18436 .42076 | .21929 .43239 | .25297 .44629 | .28505 .46214 | .31517 .48013 | .34297 .50000 |

$U/K - IV/K'$
 $J + IV = SN^{-1}$
 $\{A + IB\}$

K=SIN 35

| | B | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| 0.00 | 0.00000 0.00000 | .05789 .00000 | .11657 .00000 | .17689 .00000 | .23792 .00000 | .30401 .00000 | .37555 .00000 | .45505 .00000 | .46207 .00000 | .55933 .00000 | .68683 .00000 | 1.00000 .00000 |
| .10 | 0.00000 .04904 | .05750 .04936 | .11576 .05036 | .17557 .05214 | .23792 .05487 | .30401 .05891 | .37555 .06488 | .45505 .07407 | .54646 .08943 | .65543 .11942 | .77550 .18800 | |
| .20 | 0.00000 .09744 | .05638 .09806 | .11341 .09997 | .17178 .10334 | .23227 .10649 | .29583 .11594 | .36346 .12679 | .43650 .14264 | .51589 .16676 | .60035 .20478 | .68120 .26296 | |
| .30 | 0.00000 .14461 | .05461 .14546 | .10973 .14614 | .16588 .15280 | .22352 .15983 | .28343 .16986 | .34598 .16367 | .41134 .20338 | .47903 .23065 | .54665 .26835 | .60899 .31609 | |
| .40 | 0.00000 .19008 | .05233 .19113 | .10502 .19334 | .15941 .19593 | .21262 .20824 | .26850 .21984 | .32551 .23556 | .38357 .25649 | .44171 .28397 | .49769 .31918 | .5404 .36246 | |
| .50 | 0.00000 .23347 | .04970 .23464 | .09960 .23821 | .14991 .24436 | .20074 .25339 | .25212 .26575 | .30388 .28208 | .35554 .30305 | .40613 .32942 | .45413 .35167 | .49759 .39974 | |
| .60 | 0.00000 .27453 | .04685 .27576 | .09378 .27951 | .14086 .28592 | .18807 .29523 | .23531 .30777 | .28229 .32334 | .32847 .34419 | .37306 .36868 | .41491 .39819 | .45272 .43192 | |
| .70 | 0.00000 .31314 | .04391 .31439 | .06781 .31818 | .13166 .32461 | .17536 .33386 | .21872 .34614 | .26142 .36172 | .30296 .36085 | .34268 .40367 | .37973 .43021 | .41319 .46024 | |
| .80 | 0.00000 .34926 | .04098 .35049 | .08168 .35421 | .12259 .36049 | .16296 .36945 | .20271 .38122 | .24167 .35955 | .27926 .41377 | .31496 .43471 | .34814 .45871 | .37814 .46552 | |
| .90 | 0.00000 .38292 | .03813 .38411 | .07613 .38769 | .11385 .39370 | .15112 .40222 | .18765 .41335 | .22324 .42709 | .25741 .44354 | .28975 .46267 | .31976 .48435 | .34693 .50837 | |
| 1.00 | 0.00000 .41421 | .03540 .41534 | .07065 .41873 | .10557 .42441 | .13996 .43242 | .17357 .44274 | .20616 .45552 | .23739 .47063 | .26686 .48805 | .29621 .50765 | .31903 .52921 | |

$U/K + IV/K'$

$U+IV=SN$ $(A+iB)$

K=SEN 4.8

| B | A=0.30 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A=1.00 |
|------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 0.00 | 0.00000 | .05670 | .11301 | .17162 | .23279 | .29354 | .37031 | .45162 | .54875 | .67761 | 1.00000 |
| | 0.00000 | .00000 | .00000 | .00000 | .00006 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .10 | 0.00700 | .05570 | .11217 | .17026 | .23095 | .29555 | .36576 | .44427 | .53525 | .64464 | .76598 |
| | .05191 | .05303 | .05501 | .05806 | .06253 | .06937 | .07178 | .09725 | .13143 | .20966 | |
| .20 | 0.00000 | .05454 | .10975 | .16634 | .22511 | .28700 | .35316 | .42488 | .50317 | .58671 | .66638 |
| | .10237 | .10306 | .10520 | .10597 | .11174 | .12116 | .13534 | .15228 | .18067 | .22400 | .29059 |
| .30 | 0.00000 | .05272 | .10597 | .16026 | .21616 | .27424 | .33499 | .39864 | .46459 | .53027 | .59011 |
| | .15184 | .15280 | .15577 | .16097 | .16843 | .17000 | .19582 | .21783 | .24658 | .29150 | .34623 |
| .40 | 0.00000 | .05039 | .10113 | .15658 | .20505 | .25677 | .31380 | .36960 | .42570 | .47930 | .52722 |
| | .19939 | .20056 | .20414 | .21035 | .21951 | .23258 | .25017 | .27367 | .30459 | .34433 | .39326 |
| .50 | 0.00000 | .04769 | .09559 | .14787 | .19265 | .24153 | .29151 | .34085 | .38688 | .43334 | .47387 |
| | .24464 | .24594 | .24990 | .25672 | .26675 | .28051 | .29668 | .32208 | .35154 | .38761 | .43019 |
| .60 | 0.00000 | .04479 | .08965 | .13663 | .17971 | .22473 | .26939 | .31310 | .35495 | .39370 | .42793 |
| | .28868 | .29262 | .29490 | .31018 | .32405 | .34195 | .36439 | .39175 | .42421 | .46149 | |
| .70 | 0.00000 | .04181 | .08355 | .12529 | .16679 | .20787 | .24617 | .28715 | .32406 | .35801 | .38797 |
| | .32728 | .32868 | .33282 | .33989 | .35005 | .36355 | .38070 | .40172 | .42680 | .45590 | .48870 |
| .80 | 0.00000 | .03865 | .07260 | .11613 | .15426 | .1917 | .22822 | .26322 | .29614 | .32630 | .35297 |
| | .36452 | .36536 | .36993 | .37679 | .38058 | .39541 | .41553 | .43397 | .45777 | .49383 | .51281 |
| .90 | 0.00000 | .03598 | .07182 | .10735 | .14237 | .17661 | .20974 | .24136 | .27038 | .30808 | .32243 |
| | .39907 | .4036 | .40425 | .4078 | .42004 | .43209 | .44701 | .46482 | .48547 | .50380 | .53450 |
| 1.00 | 0.00000 | .03326 | .06635 | .09308 | .13124 | .16257 | .19277 | .22149 | .24844 | .27294 | .29482 |
| | .43104 | .43226 | .43592 | .44205 | .45059 | .46185 | .47553 | .49161 | .51046 | .53136 | .55423 |

$$J + IV_{23}N \quad (A+18)$$

X = SINK 45

| B | | A=0.00 | A=.10 | A=.20 | A=.30 | A=.40 | A=.50 | A=.60 | A=.70 | A=.80 | A=.90 | A=1.00 |
|------|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.00 | | .000000 | .06407 | *10897 | *16561 | *22510 | *28089 | *35913 | *43930 | *53607 | *66667 | 1.00000 |
| .10 | | .000000 | .000000 | .000000 | .000000 | .000000 | .000000 | .000000 | .000000 | .000000 | .000000 | .000000 |
| .20 | | .000000 | .05366 | *10811 | *16422 | *22299 | *28577 | *35638 | *43160 | *52184 | *63143 | .75375 |
| .30 | | .000000 | .05420 | *05544 | *05765 | .06107 | .06616 | .07374 | .08551 | .10539 | .14450 | .23443 |
| .40 | | .000000 | .05240 | *10564 | *16019 | *21698 | *27695 | *34129 | *41134 | *48811 | *57615 | .64769 |
| .50 | | .000000 | .10581 | *10758 | *17994 | *11412 | *12054 | *12994 | *14359 | *16381 | *19486 | .24426 |
| .60 | | .000000 | .15831 | *15938 | *10177 | *15398 | *23480 | *26381 | *32249 | *38405 | *44777 | .51082 |
| .70 | | .000000 | .20771 | *20899 | *09665 | *14014 | *19643 | *24794 | *30069 | *35426 | *40747 | .50168 |
| .80 | | .000000 | .25457 | *25589 | *09122 | *13725 | *18352 | *23071 | *27793 | *32464 | *36973 | .36690 |
| .90 | | .000000 | .29861 | *30199 | *08523 | *12796 | *17073 | *21237 | *25551 | *29650 | *32450 | .42358 |
| 1.00 | | .000000 | .33970 | *34119 | *03959 | *07914 | *11858 | *15775 | *19641 | *23417 | *27044 | .47896 |
| - | | .000001 | .37782 | *37927 | *03664 | *07316 | *10945 | *14524 | *18033 | *21430 | *24664 | .30384 |
| .90 | | .000000 | .41305 | *41643 | *03380 | *06743 | *10072 | *13345 | *16534 | *19683 | *22509 | .27629 |
| 1.00 | | .000000 | .44601 | *44551 | *03111 | *06203 | *09257 | *12249 | *15153 | *17937 | *20565 | .22998 |
| - | | .000000 | .45725 | *46643 | *45672 | *42561 | *43551 | *46041 | *46434 | *46331 | *50522 | .52985 |
| 1.00 | | .000000 | .45725 | *46643 | *45672 | *42561 | *43551 | *46041 | *46434 | *46331 | *50522 | .55152 |

U/K+IV/K'
-1
U+IV=SN (A+IB)

K=SIN 50

| B | A=0.00 | A= .10 | F= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A=1.00 |
|------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 0.00 | 0.00208 | .05230 | .10444 | .15985 | .21616 | .27783 | .34624 | .42491 | .52097 | .65247 | 1.00000 |
| | 0.00003 | .00003 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .10 | 0.00000 | .15139 | .10357 | .15743 | .21401 | .27467 | .34132 | .41686 | .50543 | .61526 | .73793 |
| | .05582 | .05326 | .05762 | .06006 | .06384 | .06946 | .07796 | .09122 | .11384 | .15879 | .26311 |
| .20 | 0.00000 | .05019 | .10106 | .15234 | .20787 | .26563 | .32780 | .3957 | .47048 | .55027 | .62428 |
| | .11420 | .11420 | .11660 | .12588 | .13628 | .15148 | .17414 | .20921 | .26547 | .35344 | |
| .30 | 0.00006 | .16851 | .09775 | .14704 | .19854 | .25220 | .30849 | .36755 | .42652 | .48813 | .53966 |
| | .16521 | .16521 | .16637 | .17512 | .18469 | .19846 | .21790 | .24533 | .28413 | .33845 | .41075 |
| .40 | 0.00300 | .04592 | .09219 | .13913 | .18703 | .23608 | .2866 | .33798 | .38715 | .43377 | .47277 |
| | .21508 | .21508 | .21647 | .22076 | .22922 | .23940 | .25510 | .27654 | .30532 | .34337 | .39236 |
| .50 | 0.00000 | .04318 | .09655 | .13024 | .17433 | .21878 | .26327 | .30710 | .34697 | .38688 | .41627 |
| | .25331 | .26485 | .26955 | .27767 | .28964 | .30609 | .32789 | .35501 | .39143 | .43465 | .48515 |
| .60 | 0.00000 | .04026 | .08057 | .12092 | .16125 | .20435 | .24083 | .27895 | .31466 | .34652 | .37292 |
| | .30850 | .31010 | .31497 | .32330 | .33542 | .35177 | .37290 | .39935 | .43151 | .46939 | .51232 |
| .70 | 0.00000 | .03729 | .07452 | .11160 | .14830 | .18453 | .21967 | .25316 | .28415 | .31163 | .33456 |
| | .35051 | .35211 | .35694 | .36516 | .37690 | .39269 | .41258 | .43691 | .46577 | .49644 | .53579 |
| .80 | 0.00000 | .03438 | .06862 | .10258 | .13603 | .16869 | .20013 | .22983 | .25714 | .28133 | .30171 |
| | .38933 | .39068 | .39555 | .40344 | .41467 | .42940 | .44778 | .46988 | .49563 | .52474 | .55664 |
| .90 | 0.00000 | .03159 | .06350 | .09495 | .12449 | .15404 | .18231 | .20889 | .23325 | .25487 | .27328 |
| | .42508 | .42654 | .43096 | .43837 | .44885 | .46245 | .47924 | .49917 | .52209 | .54771 | .57552 |
| 1.00 | 0.00000 | .02897 | .05774 | .08611 | .11383 | .14064 | .16620 | .19015 | .21209 | .23166 | .24848 |
| | .45753 | .45926 | .46337 | .47624 | .47989 | .49233 | .50755 | .54583 | .56843 | .59284 | |

$U/K + IV/K'$
 -1
 $U+IV = SN \quad (A+IB)$

K= SIN 55

| B | A=0.00 | A=.10 | A=.20 | A=-.30 | A=.40 | A=.50 | A=.60 | A=.70 | A=.80 | A=.90 | A=1.00 |
|------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 0.00 | 0.00000 | .04928 | .09941 | .15132 | .20614 | .26544 | .33151 | .40820 | .50305 | .63550 | 1.00000 |
| | 0.00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .10 | 0.00000 | .04887 | .09854 | .14389 | .20337 | .26217 | .32645 | .39983 | .48717 | .59559 | .71721 |
| | .05760 | .05408 | .05936 | .06222 | .06636 | .07257 | .08198 | .09684 | .12252 | .17435 | .29649 |
| .20 | 0.00000 | .04767 | .09602 | .14577 | .19776 | .25299 | .31261 | .37800 | .45006 | .52666 | .59537 |
| | .11426 | .11517 | .11799 | .12299 | .13071 | .14213 | .15891 | .18412 | .22350 | .28727 | .35726 |
| .30 | 0.00000 | .04580 | .09211 | .13945 | .18837 | .23573 | .29297 | .34913 | .41681 | .46235 | .50001 |
| | .16913 | .17039 | .17427 | .18110 | .19150 | .202 | .22783 | .25203 | .30096 | .36121 | .44112 |
| .40 | 0.00000 | .04342 | .08717 | .13156 | .17686 | .22323 | .27059 | .31833 | .36493 | .40736 | .44113 |
| | .22152 | .22302 | .22764 | .23570 | .24777 | .26479 | .28807 | .31939 | .36084 | .41409 | .47884 |
| .50 | 0.00000 | .04071 | .08158 | .12274 | .16424 | .20600 | .24766 | .28843 | .32690 | .36095 | .38795 |
| | .27093 | .27258 | .27762 | .28633 | .29918 | .31687 | .34032 | .37059 | .40863 | .45481 | .50824 |
| .60 | 0.00000 | .03783 | .07568 | .11355 | .15133 | .18800 | .22551 | .26069 | .29321 | .32163 | .34434 |
| | .31757 | .31876 | .32397 | .33285 | .34578 | .36323 | .38576 | .41392 | .44804 | .48798 | .53278 |
| .70 | 0.00000 | .03492 | .06976 | .10441 | .13870 | .17232 | .20482 | .23554 | .26361 | .28805 | .30784 |
| | .35982 | .3651 | .36664 | .37536 | .38788 | .40451 | .42554 | .45120 | .48151 | .51612 | .56420 |
| .80 | 0.00000 | .03208 | .06401 | .09563 | .12670 | .15691 | .18587 | .21300 | .23766 | .25945 | .27663 |
| | .39920 | .40083 | .40575 | .41406 | .42538 | .44137 | .46066 | .48377 | .51058 | .54070 | .57342 |
| .90 | 0.00000 | .02937 | .05657 | .08737 | .11555 | .14279 | .16073 | .19292 | .21487 | .23409 | .25014 |
| | .43532 | .43686 | .44149 | .44925 | .46021 | .47443 | .49191 | .51260 | .53630 | .56262 | .59099 |
| 1.00 | 0.00000 | .02685 | .05350 | .07973 | .10531 | .12991 | .15332 | .17507 | .19403 | .21224 | .22697 |
| | .46838 | .46981 | .47409 | .48124 | .49128 | .50419 | .51994 | .53841 | .55936 | .58246 | .60723 |

$$\begin{aligned} U/K+IV/K^2 \\ U+IV=SN^{-1}(A+IB) \end{aligned}$$

K=SIN 60

| B | A=0.00 | A=.10 | A=.20 | A=.30 | A=.40 | A=.50 | A=.60 | A=.70 | A=.80 | A=.90 | A=1.0 |
|------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 0.00 | 0.00000 | .04651 | .09385 | .14295 | .19496 | .2144 | .31474 | .36887 | .46160 | .61453 | 1.00000 |
| | 0.00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .10 | 0.00000 | .04610 | .09298 | .14153 | .19279 | .24815 | .30960 | .38024 | .46512 | .57157 | .68379 |
| | .05915 | .05966 | .06126 | .06412 | .06801 | .07537 | .08573 | .10227 | .13129 | .19106 | .32497 |
| .20 | 0.00000 | .04491 | .09049 | .13745 | .18660 | .23893 | .29560 | .35791 | .42663 | .49898 | .56054 |
| | .11729 | .1826 | .12129 | .12667 | .13502 | .14741 | .16576 | .19355 | .23738 | .3093 | .4211 |
| .30 | 0.00000 | .04307 | .08664 | .13120 | .17729 | .2253, | .27591 | .32877 | .38267 | .43346 | .47273 |
| | .17350 | .17485 | .17900 | .18633 | .19752 | .21373 | .23682 | .26970 | .31664 | .36252 | .46906 |
| .40 | 0.00000 | .04074 | .08178 | .12343 | .16593 | .20940 | .25369 | .29811 | .34097 | .37905 | .40773 |
| | .22706 | .22867 | .23359 | .24219 | .25510 | .27334 | .29833 | .33201 | .37656 | .43352 | .50192 |
| .50 | 0.00000 | .03809 | .07632 | .11480 | .15357 | .19249 | .23117 | .26876 | .30377 | .33402 | .35694 |
| | .27745 | .2721 | .28455 | .29380 | .30745 | .32627 | .35121 | .38337 | .42367 | .47228 | .52784 |
| .60 | 0.00000 | .03529 | .07058 | .10586 | .14100 | .17575 | .20963 | .24185 | .27126 | .29641 | .31581 |
| | .32436 | .32610 | .33166 | .34104 | .35468 | .37313 | .39685 | .42647 | .46221 | .50375 | .54985 |
| .70 | 0.00000 | .03247 | .06486 | .09703 | .12879 | .15984 | .18969 | .21769 | .24296 | .26430 | .28165 |
| | .36772 | .36950 | .37488 | .38403 | .39716 | .41459 | .43658 | .46334 | .49480 | .53048 | .56938 |
| .80 | 0.00000 | .02974 | .05933 | .08959 | .11728 | .14508 | .17158 | .19622 | .21839 | .23743 | .25276 |
| | .40753 | .40923 | .41437 | .42304 | .43536 | .45148 | .47151 | .49544 | .52317 | .55391 | .58715 |
| .90 | 0.00000 | .02715 | .05412 | .08070 | .10663 | .13161 | .15529 | .17722 | .19695 | .21403 | .22801 |
| | .44393 | .44553 | .45033 | .45339 | .46975 | .48446 | .50251 | .52380 | .54807 | .57488 | .60358 |
| 1.00 | 0.00000 | .02475 | .04930 | .07344 | .09631 | .11945 | .14074 | .16043 | .17818 | .19365 | .20658 |
| | .47716 | .47863 | .48305 | .49043 | .50076 | .51463 | .53025 | .54914 | .57050 | .59392 | .61890 |

$U/K+IV/K'$
 -1
 $U+IV = SN \quad (A+IB)$

K=SIN 65

| | B | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A=1.00 |
|------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|--------|
| 0.00 | 0.00003 0.00006 | .04345 .00000 | .08770 .01000 | .13367 .00000 | .19249 .00000 | .23571 .00000 | .29569 .00000 | .36654 .00000 | .45660 .00000 | .58856 .00000 | 1.00000 .00000 | |
| .10 | 0.00000 .06046 | .04305 .06271 | .08686 .06577 | .13225 .07056 | .18036 .07789 | .23245 .06914 | .29055 .10735 | .35777 .13908 | .43926 .20853 | .57773 .37773 | .65349 .231 | |
| .20 | 0.00000 .11984 | .04190 .12068 | .08443 .12410 | .12834 .12983 | .17430 .13875 | .22336 .15205 | .27662 .17189 | .33531 .20216 | .39993 .25041 | .46700 .32985 | .52000 .45370 | |
| .30 | 0.00000 .17719 | .04011 .17862 | .08069 .18301 | .12223 .19079 | .16521 .25269 | .21309 .21999 | .25720 .24473 | .30638 .28011 | .35609 .33073 | .40160 .40160 | .43463 .49374 | |
| .40 | 0.00000 .23173 | .03780 .23342 | .07600 .23861 | .11471 .24770 | .15419 .26136 | .19453 .26068 | .23553 .30720 | .27643 .34297 | .31540 .39021 | .34913 .45022 | .37310 .52124 | |
| .50 | 0.00000 .28292 | .03534 .28476 | .07074 .29036 | .10639 .30009 | .14227 .31445 | .17821 .33424 | .21379 .36047 | .24812 .39425 | .27970 .43643 | .30634 .40692 | .32566 .54391 | |
| .60 | 0.00000 .33047 | .03263 .33235 | .06525 .33808 | .09783 .34789 | .13023 .36215 | .16219 .38139 | .19319 .40617 | .22246 .43699 | .24886 .47402 | .27099 .51675 | .28752 .56369 | |
| .70 | 0.00000 .37429 | .02995 .37614 | .05980 .38174 | .08942 .39124 | .11861 .40490 | .14705 .42293 | .17427 .44577 | .19962 .47340 | .22228 .50575 | .24133 .54220 | .25599 .58161 | |
| .80 | 0.00000 .41442 | .02736 .41613 | .05456 .42150 | .08142 .43047 | .10771 .44320 | .13311 .45384 | .15720 .48047 | .17946 .50503 | .19331 .53327 | .21613 .56461 | .22942 .59816 | |
| .90 | 0.00000 .45103 | .02492 .45267 | .04965 .45762 | .07398 .46592 | .09769 .47760 | .12045 .49271 | .14196 .51120 | .16172 .53294 | .17938 .55763 | .19448 .58476 | .20671 .61344 | |
| 1.00 | 0.00000 .48436 | .02266 .48587 | .04512 .49041 | .06710 .49757 | .08858 .50857 | .10909 .52216 | .12836 .53865 | .14611 .55706 | .16261 .57950 | .17574 .60314 | .18709 .62632 | |

$U/K+IV/K'$
 \sim_1
 $U+IV=SN \quad (A+IB)$

K=SIN 70

| | B | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|------|---------|---------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| 0.00 | 0.00000 | .04005 | .08008 | .12335 | .16854 | .21798 | .27398 | .34065 | .42656 | .55585 | .60000 | .60000 |
| | 0.00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .10 | 0.00000 | .03967 | .08006 | .12202 | .16649 | .21482 | .26895 | .33194 | .40886 | .50673 | .60649 | .62162 |
| | .06153 | .06211 | .06390 | .06713 | .07223 | .08002 | .09210 | .11191 | .14793 | .22592 | .42162 | |
| .20 | 0.00000 | .03858 | .07776 | .11021 | .16057 | .20604 | .25538 | .30981 | .36961 | .43052 | .47452 | |
| | .12194 | .12303 | .12641 | .13245 | .14187 | .15600 | .17716 | .20974 | .26206 | .34863 | .48159 | |
| 20 | .30 | 0.00000 | .03688 | .07421 | .11242 | .15198 | .19330 | .23265 | .28175 | .32693 | .36739 | .39434 |
| | .18020 | .18170 | .18631 | .19447 | .0699 | .022524 | .025143 | .028899 | .034280 | .041781 | .051420 | |
| .40 | 0.00000 | .03475 | .06976 | .10528 | .14150 | .17646 | .21594 | .25312 | .28613 | .31769 | .33755 | |
| | .23553 | .23729 | .24272 | .25221 | .26651 | .28676 | .31459 | .35212 | .40157 | .46393 | .53668 | |
| .50 | 0.00000 | .03234 | .06479 | .09742 | .13022 | .16302 | .19538 | .22639 | .25457 | .27786 | .29610 | |
| | .26736 | .28927 | .29512 | .30523 | .32017 | .34073 | .36808 | .40316 | .44683 | .49871 | .55561 | |
| .60 | 0.00000 | .02982 | .05963 | .08937 | .11691 | .14796 | .17604 | .20237 | .22587 | .24524 | .25930 | |
| | .33540 | .33735 | .34329 | .35344 | .36622 | .36812 | .41374 | .44551 | .48353 | .52711 | .57456 | |
| .70 | 0.00000 | .02731 | .05452 | .08150 | .10804 | .13383 | .15641 | .18115 | .20130 | .21802 | .23062 | |
| | .37958 | .38148 | .38726 | .39707 | .41113 | .42975 | .45316 | .48146 | .51446 | .55147 | .59117 | |
| .80 | 0.00000 | .02490 | .04964 | .07405 | .09789 | .12067 | .14257 | .16253 | .18017 | .19497 | .20649 | |
| | .41995 | .42176 | .42723 | .43643 | .44950 | .46655 | .48764 | .51268 | .54136 | .57304 | .60676 | |
| .90 | 0.00000 | .02263 | .04508 | .06715 | .08850 | .10916 | .12849 | .14620 | .16191 | .17523 | .18590 | |
| | .45671 | .45839 | .46346 | .47194 | .48387 | .49928 | .51611 | .54019 | .55517 | .59252 | .62149 | |
| 1.00 | 0.00000 | .02054 | .04090 | .06086 | .08020 | .09854 | .11601 | .13190 | .14604 | .15818 | .16813 | |
| | .49165 | .49627 | .50398 | .51477 | .52858 | .54631 | .56476 | .58659 | .61035 | .63547 | | |

$U/K + IV/K'$
 -1
 $U+IV=SN^{-1} (A+B)$

K=SIN 75

| B | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A=1.00 |
|------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.00 | 0.00000 | *03624 | *07321 | *11170 | *15273 | *19774 | *24895 | *31035 | *39041 | *51411 | *76060 |
| | 0.00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .10 | 0.00000 | *03589 | *07246 | *11046 | *15081 | *19477 | *24417 | *30194 | *37294 | *45339 | *54829 |
| | .06237 | .06297 | .06464 | .06820 | .07354 | .08173 | .09454 | .11575 | .15497 | .24197 | .46123 |
| .20 | 0.00000 | *03487 | *07031 | *10691 | *14537 | *18652 | *23133 | *28079 | *33495 | *38902 | *42461 |
| | .12357 | .12470 | .12821 | .13450 | .14435 | .15914 | .18143 | .21596 | .27179 | .36433 | .50368 |
| .30 | 0.00000 | *03330 | *06761 | *10153 | *13727 | *17461 | *21375 | *25436 | *29467 | *32990 | *35179 |
| | .18254 | .18409 | .1887 | .19735 | .21037 | .22940 | .25677 | .29613 | .35252 | .43066 | .52841 |
| .40 | 0.00000 | *03133 | *06290 | *09492 | *12756 | *16084 | *19450 | *22772 | *25869 | *28627 | *30066 |
| | .23847 | .24029 | .24591 | .25573 | .27054 | .29153 | .32041 | .35934 | .41049 | .47455 | .54835 |
| .50 | 0.00000 | *02911 | *05632 | *08767 | *11716 | *14653 | *17552 | *20310 | *22792 | *24808 | *26166 |
| | .29079 | .29275 | .29678 | .30921 | .32462 | .34587 | .37401 | .41012 | .45468 | .50773 | .56616 |
| .60 | 0.00000 | *02680 | *05356 | *08028 | *10676 | *13276 | *15780 | *18115 | *20181 | *21861 | *23053 |
| | .33920 | .34121 | .34730 | .35773 | .37290 | .39333 | .41958 | .45208 | .49011 | .53497 | .58270 |
| .70 | 0.00000 | *02450 | *04890 | *07308 | *09682 | *11985 | *14172 | *15186 | *17956 | *19412 | *20469 |
| | .36364 | .36559 | .39151 | .40154 | .41593 | .43497 | .45884 | .48766 | .52113 | .55847 | .59632 |
| .80 | 0.00000 | *02230 | *04445 | *06628 | *08756 | *10806 | *12735 | *14499 | *16051 | *17341 | *18335 |
| | .42419 | .42604 | .43161 | .44100 | .45432 | .47167 | .49310 | .51850 | .54748 | .57738 | .61318 |
| .90 | 0.00000 | *02024 | *04030 | *06001 | *07915 | *09745 | *11460 | *13027 | *14408 | *15573 | *16497 |
| | .46105 | .46276 | .46791 | .47653 | .48866 | .50430 | .52337 | .54569 | .57067 | .59835 | .62735 |
| 1.00 | 0.00000 | *01834 | *03651 | *05431 | *07155 | *08797 | *10334 | *12984 | *14048 | *14913 | *14989 |
| | .49605 | .49646 | .50074 | .50856 | .51946 | .53346 | .55036 | .56497 | .59193 | .61577 | .64389 |

$U/K + IV/K'$
 -1
 $I + IV = SN$ (A + IB)

K=SIN 80

| B | A=0.00 | A=.10 | A=.20 | A=.30 | A=.40 | A=.50 | A=.60 | A=.70 | A=.80 | A=.90 | A=1.00 |
|------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| 0.00 | U.00000 0.00000 | .03102 .00000 | .06428 .00000 | .09811 .00000 | .13422 .00000 | .17392 .00000 | .21923 .00000 | .27384 .00000 | .34576 .00000 | .45945 .00000 | 1.00000 .00000 |
| .10 | 0.00000 .06297 | .03150 .06355 | .06361 .06551 | .09699 .06998 | .13249 .07449 | .17123 .08293 | .21497 .09635 | .26609 .11867 | .32933 .16049 | .40980 .25510 | .47875 .49146 |
| .20 | 0.00000 .12473 | .03059 .12590 | .06160 .12951 | .09381 .13598 | .12750 .14614 | .16378 .16444 | .20322 .18456 | .24676 .22061 | .29627 .27912 | .34065 .37609 | .36912 .51937 |
| .30 | 0.00000 .18423 | .02919 .18580 | .05874 .19071 | .08900 .19941 | .12034 .21281 | .15301 .23242 | .18738 .26067 | .22207 .30135 | .25784 .35963 | .28781 .43997 | .30541 .53905 |
| .40 | 0.00000 .24056 | .02743 .24243 | .05007 .24818 | .08310 .25425 | .11167 .27343 | .14077 .29497 | .17015 .32460 | .19903 .36544 | .22574 .41689 | .24743 .48209 | .26083 .55647 |
| .50 | 0.00000 .29222 | .02540 .29524 | .05100 .30139 | .07666 .31204 | .10241 .32779 | .1280d .34951 | .15326 .37825 | .17716 .4150A | .19851 .45059 | .21562 .51407 | .22689 .57279 |
| .60 | 0.00000 .34190 | .02341 .34394 | .04679 .35015 | .07010 .36078 | .09319 .37623 | .11582 .39701 | .13757 .42373 | .1577b .45672 | .17552 .49544 | .19979 .54047 | .213931 .58835 |
| .70 | 0.00000 .38652 | .02137 .39451 | .04266 .36850 | .06373 .39451 | .08440 .40471 | .10442 .41932 | .12351 .43863 | .14078 .46285 | .15600 .49201 | .16840 .52579 | .17750 .56335 |
| .80 | 0.00000 .42718 | .01943 .42505 | .03873 .43471 | .05773 .44423 | .07625 .45772 | .09403 .47521 | .11074 .49695 | .12598 .52258 | .13932 .55177 | .15035 .58360 | .15878 .61764 |
| .90 | 0.00000 .46410 | .01761 .46584 | .03508 .47105 | .05222 .47977 | .06814 .49203 | .08471 .50787 | .09956 .52706 | .11308 .54953 | .12497 .57485 | .13495 .60241 | .14282 .63142 |
| 1.00 | 0.00000 .42756 | .01595 .49914 | .03174 .50365 | .04721 .51177 | .06217 .52279 | .07641 .53681 | .08970 .55390 | .10183 .57361 | .11255 .59566 | .12167 .61954 | .12906 .64465 |

$U/K+IV/K'$
 -1
 $U+IV=SN$ $(A+IB)$

K=SIN 65

| B | A=0.00 | A=.10 | A=.20 | A=.30 | A=.40 | A=.50 | A=.60 | A=.70 | A=.80 | A=.90 | A=1.00 |
|------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| .10 | 0.00000 | .02618 | .05291 | .08077 | .11054 | .14339 | .18078 | .22610 | .26616 | .30262 | 1.00000 |
| | 0.00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| | 0.06333 | .02592 | .05235 | .07384 | .10909 | .14104 | .17710 | .21952 | .27202 | .33070 | .39191 |
| | .06396 | .06591 | .06945 | .07507 | .06376 | .09747 | .12050 | .16403 | .22637 | .26373 | .50981 |
| | 0.00000 | .02517 | .05075 | .07719 | .10501 | .13481 | .16732 | .20321 | .24227 | .28009 | .30180 |
| | .12543 | .12661 | .13029 | .13688 | .14722 | .16264 | .18652 | .22347 | .26368 | .30335 | .52866 |
| | 0.00000 | .02400 | .04829 | .07318 | .09896 | .12569 | .15408 | .18320 | .21175 | .23592 | .24960 |
| | .18521 | .18683 | .19181 | .20066 | .21428 | .23424 | .26304 | .30453 | .36395 | .44556 | .54532 |
| | 0.00000 | .02254 | .04525 | .06826 | .09174 | .11562 | .13973 | .16336 | .19509 | .20256 | .21310 |
| | .24182 | .24372 | .24955 | .25976 | .27517 | .29704 | .32713 | .36768 | .42074 | .48558 | .56126 |
| .50 | 0.00000 | .02091 | .04187 | .06293 | .08406 | .10511 | .12572 | .14523 | .16258 | .17637 | .18532 |
| | .29468 | .29672 | .30295 | .31374 | .32970 | .35169 | .38079 | .41604 | .46399 | .51783 | .57669 |
| | 0.00000 | .01921 | .03639 | .05750 | .07643 | .09496 | .11274 | .12921 | .14363 | .15517 | .16315 |
| | .34351 | .34557 | .35185 | .36260 | .37822 | .39924 | .42621 | .45950 | .49899 | .54372 | .59168 |
| | 0.00000 | .01752 | .03497 | .05223 | .06917 | .08554 | .10103 | .11522 | .12758 | .13761 | .14492 |
| | .38623 | .39024 | .39631 | .40660 | .42135 | .44082 | .46523 | .49460 | .52656 | .56624 | .60620 |
| | 0.00000 | .01592 | .03173 | .04729 | .06245 | .07698 | .09062 | .10304 | .11368 | .12282 | .12960 |
| | .42896 | .43085 | .43655 | .44615 | .45974 | .47744 | .49924 | .52500 | .55431 | .58641 | .62025 |
| | 0.00000 | .01442 | .02672 | .04274 | .05634 | .06930 | .08142 | .09244 | .10211 | .11020 | .11655 |
| | .46592 | .46767 | .47292 | .48170 | .49403 | .50991 | .52925 | .55181 | .57720 | .60480 | .63381 |
| 1.00 | 0.00000 | .01305 | .02597 | .03362 | .05085 | .06243 | .07333 | .08320 | .09192 | .09933 | .10531 |
| | .50098 | .50575 | .51368 | .52476 | .53691 | .55599 | .57577 | .59785 | .62176 | .64685 | |

$U/K + IV/K'$
 -1
 $U+IV=SN^- (A+IB)$

K=SIN 86

| B | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A=1.00 |
|------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.00 | 0.00000 | .02476 | .05002 | .07637 | .10452 | .13550 | .17096 | .21385 | .27074 | .36229 | .40000 |
| | 0.00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .10 | 0.00000 | .02451 | .04949 | .07549 | .10315 | .13337 | .16748 | .20761 | .25730 | .32039 | .37026 |
| | .06337 | .06400 | .06596 | .06950 | .07514 | .08386 | .09760 | .12072 | .16447 | .26480 | .51201 |
| .20 | 0.00000 | .02379 | .04793 | .07298 | .09928 | .12746 | .15821 | .19214 | .22906 | .26476 | .26511 |
| | .12552 | .12670 | .13038 | .13698 | .14735 | .16301 | .18675 | .22382 | .28423 | .38423 | .52976 |
| .30 | 0.00000 | .02269 | .04566 | .06918 | .09355 | .11901 | .14566 | .17318 | .20015 | .22294 | .23576 |
| | .18533 | .18695 | .19194 | .20081 | .21446 | .23446 | .26332 | .30492 | .36447 | .46624 | .54607 |
| .40 | 0.00000 | .02131 | .04277 | .06454 | .08672 | .10930 | .13207 | .15440 | .17491 | .19139 | .20130 |
| | .24197 | .24387 | .24971 | .25994 | .27538 | .29729 | .32744 | .36805 | .42120 | .48711 | .56102 |
| .50 | 0.00000 | .01976 | .03958 | .05948 | .07945 | .09934 | .11082 | .13725 | .15362 | .16663 | .17505 |
| | .29486 | .29690 | .30314 | .31394 | .32992 | .35195 | .38109 | .41840 | .46440 | .51828 | .57716 |
| .60 | 0.00000 | .01815 | .03628 | .05434 | .07223 | .08974 | .10654 | .12209 | .13570 | .14659 | .15411 |
| | .34370 | .34577 | .35205 | .36281 | .37846 | .39251 | .42651 | .45983 | .49935 | .54411 | .59207 |
| .70 | 0.00000 | .01656 | .03305 | .04936 | .06536 | .08083 | .09546 | .10886 | .12053 | .12999 | .13688 |
| | .30844 | .39044 | .39652 | .40662 | .42159 | .44108 | .46552 | .49490 | .52069 | .56658 | .60655 |
| .80 | 0.00000 | .01504 | .02998 | .04468 | .05900 | .07274 | .08562 | .09735 | .10758 | .11601 | .12241 |
| | .42917 | .43107 | .43676 | .44638 | .45999 | .47764 | .49951 | .52529 | .55461 | .58672 | .62057 |
| .90 | 0.00000 | .01363 | .02713 | .04038 | .05323 | .06548 | .07693 | .08733 | .09646 | .10409 | .11099 |
| | .46614 | .46789 | .47314 | .46193 | .49427 | .51016 | .52951 | .55209 | .57748 | .60508 | .63409 |
| 1.00 | 0.00000 | .01233 | .02454 | .03649 | .04804 | .05902 | .06927 | .07860 | .08683 | .09382 | .09946 |
| | .49961 | .50120 | .51391 | .52499 | .53917 | .55624 | .57602 | .59812 | .62202 | .64712 | |

$U/K + IV/K'$
 -1
 $U + IV = SN \quad (1 + 'B)$

K=SIN 87

| B | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A=1.00 |
|------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| .00 | 0.00000 | .02313 | .04673 | .07134 | .09704 | .12651 | .15972 | .19982 | .25304 | .33881 | .1.00000 |
| | 0.00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| | .10 | 0.00000 | .02289 | .04523 | .07051 | .09635 | .12451 | .15646 | .19397 | .24043 | .29940 |
| | .06341 | .06404 | .06600 | .06955 | .07520 | .08393 | .09771 | .12089 | .16481 | .26555 | .51371 |
| | .20 | 0.00000 | .02222 | .04481 | .06817 | .09274 | .11907 | .14779 | .17949 | .21397 | .24727 |
| | .12558 | .12677 | .13045 | .13707 | .14745 | .16314 | .18633 | .22409 | .28467 | .38492 | .53062 |
| | .30 | 0.00060 | .02119 | .04264 | .06462 | .08738 | .11116 | .13605 | .16175 | .19693 | .20817 |
| | .18543 | .18704 | .19205 | .20092 | .21460 | .23463 | .26354 | .30521 | .36486 | .44676 | .54655 |
| | .40 | 0.00000 | .01990 | .03995 | .06028 | .08039 | .10208 | .12335 | .14418 | .16333 | .17869 |
| | .24399 | .24399 | .24984 | .26908 | .27554 | .29748 | .32767 | .36835 | .42156 | .48753 | .56227 |
| | .50 | 0.00000 | .01645 | .03696 | .05555 | .07420 | .09277 | .11095 | .12616 | .14343 | .15556 |
| | .29499 | .29704 | .3032% | .31410 | .33010 | .3521% | .3833 | .41868 | .46472 | .51863 | .57752 |
| .60 | 0.00000 | .01695 | .03388 | .05075 | .06745 | .08380 | .09848 | .11399 | .12669 | .13685 | .14385 |
| | .34385 | .34592 | .35221 | .36298 | .37664 | .39971 | .42674 | .46009 | .49964 | .54441 | .59238 |
| | .70 | 0.00000 | .01546 | .03086 | .04609 | .06103 | .07547 | .08913 | .10163 | .11252 | .12135 |
| | .38860 | .39060 | .39669 | .40700 | .42178 | .44124 | .46574 | .49514 | .52914 | .56685 | .60382 |
| .80 | 0.00000 | .01405 | .02799 | .04172 | .05509 | .06791 | .07994 | .09086 | .10043 | .10829 | .11426 |
| | .43123 | .43695 | .44656 | .46017 | .47789 | .49973 | .52552 | .55484 | .58696 | .62081 | .66081 |
| | .90 | 0.00000 | .01272 | .02533 | .03770 | .04969 | .06113 | .07131 | .08153 | .09504 | .10275 |
| 1.00 | .46631 | .46805 | .47331 | .48210 | .49446 | .51036 | .52971 | .55230 | .57770 | .60530 | .63432 |
| | .49978 | .50137 | .50614 | .51409 | .52518 | .53934 | .55644 | .57522 | .59632 | .62223 | .64732 |

$U/K + IV/K$
 -1
 $U+IV=SN$ (A+IB)

K=SIN 88

| B | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A=1.00 |
|------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 0.00 | 0.00000 | .02116 | .04275 | .06526 | .08932 | .11581 | .14613 | .18264 | .23157 | .31021 | 1.00000 |
| | 0.00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .10 | 0.00000 | .02094 | .04229 | .06451 | .08615 | .11393 | .14315 | .17747 | .22000 | .27396 | .31607 |
| | .06343 | .06406 | .06603 | .06958 | .07524 | .08393 | .09779 | .12102 | .16505 | .26625 | .51493 |
| .20 | 0.00000 | .02033 | .04100 | .06236 | .08434 | .10893 | .13520 | .16421 | .19575 | .22616 | .26336 |
| | .12563 | .12682 | .13051 | .13713 | .14753 | .16324 | .18706 | .22429 | .26498 | .30541 | .53124 |
| .30 | 0.00000 | .01936 | .03901 | .05111 | .07933 | .10163 | .12445 | .14796 | .17098 | .19036 | .20125 |
| | .16549 | .18711 | .19212 | .20101 | .21476 | .23476 | .26370 | .30543 | .36517 | .44713 | .54706 |
| .40 | 0.00000 | .01620 | .03654 | .05514 | .07409 | .09337 | .11262 | .13188 | .14936 | .16340 | .17181 |
| | .24217 | .24407 | .24993 | .26016 | .27566 | .29762 | .32784 | .36856 | .42182 | .48783 | .56256 |
| .50 | 0.00000 | .01683 | .03381 | .05081 | .06787 | .08468 | .10148 | .11721 | .13117 | .14225 | .14941 |
| | .29509 | .29714 | .30339 | .31422 | .33123 | .35232 | .38150 | .41867 | .46495 | .51886 | .57777 |
| .60 | 0.00000 | .01550 | .03099 | .04641 | .06169 | .07664 | .09096 | .10425 | .11586 | .12513 | .13153 |
| | .34596 | .34603 | .35233 | .36311 | .37676 | .39986 | .42690 | .46027 | .4984 | .54462 | .59260 |
| .70 | 0.00000 | .01414 | .02022 | .04245 | .05531 | .06902 | .08151 | .09294 | .10269 | .11096 | .11682 |
| | .38871 | .39072 | .39681 | .40713 | .42191 | .44143 | .46590 | .49332 | .52933 | .55704 | .60701 |
| .80 | 0.00000 | .01284 | .02560 | .03916 | .05038 | .06210 | .07310 | .08310 | .09183 | .09902 | .10447 |
| | .42946 | .43135 | .43707 | .44668 | .46031 | .47604 | .49983 | .52568 | .55501 | .58713 | .62098 |
| .90 | 0.00000 | .01164 | .02317 | .03468 | .04544 | .05590 | .06567 | .07455 | .08233 | .08884 | .09394 |
| | .46643 | .46816 | .47344 | .48223 | .49459 | .51050 | .52986 | .55245 | .57785 | .60546 | .63447 |
| 1.00 | 0.00000 | .01053 | .02095 | .03115 | .04101 | .05036 | .05913 | .06709 | .07411 | .08007 | .08468 |
| | .49990 | .50149 | .50627 | .51212 | .52531 | .53943 | .55656 | .57637 | .59847 | .62237 | .64747 |

$U/K + IV/K'$
 \sim_1
 $U + IV = SN \quad (A + IB)$

K=SIN 89

| | A=0.00 | A=.10 | A=.20 | A=.30 | A=.40 | A=.50 | A=.60 | A=.70 | A=.80 | A=.90 | A=1.00 |
|------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 0.00 | 0.00000 | .01846 | .03730 | .05695 | .07795 | .10107 | .12753 | .15957 | .20212 | .27084 | 1.00000 |
| | 0.00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .10 | 0.00000 | .01828 | .03691 | .05629 | .07632 | .09947 | .12492 | .15489 | .19201 | .23911 | .27574 |
| | .06345 | .06408 | .06604 | .06960 | .07526 | .08401 | .09783 | .12109 | .16520 | .26662 | .51566 |
| .20 | 0.00000 | .01774 | .03577 | .05442 | .07403 | .09505 | .11798 | .14330 | .17082 | .19736 | .21231 |
| | .12566 | .12604 | .13054 | .13716 | .14757 | .16329 | .18714 | .22440 | .28516 | .38570 | .53160 |
| .30 | 0.00000 | .01692 | .03404 | .05158 | .06975 | .08673 | .10860 | .12911 | .14919 | .16611 | .17557 |
| | .16553 | .18715 | .19216 | .20108 | .21476 | .23483 | .26380 | .30556 | .36534 | .44736 | .54731 |
| .40 | 0.00000 | .01588 | .03188 | .04811 | .06465 | .08144 | .09844 | .11507 | .13033 | .14256 | .14988 |
| | .24222 | .24413 | .24998 | .26024 | .27573 | .29770 | .32795 | .36868 | .42197 | .48801 | .56277 |
| .50 | 0.00000 | .01473 | .02950 | .04433 | .05922 | .07404 | .08854 | .10226 | .11446 | .12419 | .13034 |
| | .29515 | .29719 | .30345 | .31428 | .33030 | .35239 | .38160 | .41899 | .46500 | .51903 | .57793 |
| .60 | 0.00000 | .01353 | .02704 | .04050 | .05382 | .06687 | .07938 | .09095 | .10108 | .10917 | .11474 |
| | .34402 | .34609 | .35239 | .36318 | .37885 | .39995 | .42700 | .46038 | .49996 | .54475 | .59273 |
| .70 | 0.00000 | .01234 | .02462 | .03678 | .04879 | .06022 | .07112 | .08108 | .08976 | .09680 | .10191 |
| | .38878 | .39079 | .39686 | .40720 | .42199 | .44152 | .46599 | .49542 | .52944 | .56716 | .60713 |
| .80 | 0.00000 | .01121 | .02233 | .03329 | .04396 | .05418 | .06377 | .07250 | .08011 | .08638 | .09113 |
| | .42953 | .43143 | .43714 | .44676 | .46039 | .47812 | .49997 | .52577 | .55511 | .56724 | .62108 |
| .90 | 0.00000 | .01015 | .02021 | .03008 | .03965 | .04877 | .05729 | .06533 | .07182 | .07750 | .08195 |
| | .46650 | .46825 | .47351 | .48231 | .49467 | .51053 | .52994 | .55254 | .57795 | .60556 | .63457 |
| 1.00 | 0.00000 | .00919 | .01828 | .02718 | .03578 | .04396 | .05159 | .05653 | .06465 | .06985 | .07404 |
| | .49998 | .50157 | .50634 | .51429 | .52538 | .53956 | .55666 | .57645 | .59855 | .62246 | .64755 |

$U/K + IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN S

| B | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.00 |
|------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| 0.00 | .71239 .00000 | .72738 .00000 | .74319 .00000 | .75997 .00000 | .77796 .00000 | .79747 .00000 | .81900 .00000 | .84338 .00000 | .8723 .00000 | .90972 .00000 | 1.00000 .00000 |
| .01 | .71205 .00600 | .72697 .00631 | .74270 .00667 | .75938 .00711 | .77721 .00765 | .79643 .00835 | .81764 .00928 | .84130 .01063 | .86854 .01279 | .90085 .01691 | .93627 .02622 |
| .02 | .71102 .01195 | .72577 .01255 | .74127 .01326 | .75764 .01411 | .77504 .01515 | .79368 .01645 | .81381 .01819 | .83575 .02055 | .85971 .02398 | .88528 .02923 | .90994 .03711 |
| .03 | .70936 .01763 | .72383 .01970 | .73898 .01972 | .75488 .02093 | .77164 .02239 | .78931 .02419 | .80819 .02648 | .82810 .02945 | .84894 .03340 | .87000 .03666 | .88979 .04548 |
| .04 | .70710 .02359 | .72212 .02470 | .73593 .02749 | .75126 .02959 | .76727 .02929 | .78399 .03145 | .80142 .03410 | .81945 .03736 | .83780 .04147 | .85588 .04653 | .87285 .05256 |
| .05 | .70433 .02921 | .71806 .03052 | .73226 .03204 | .74696 .03376 | .76217 .03582 | .77788 .03823 | .79402 .04109 | .81044 .04450 | .82687 .04857 | .84288 .05334 | .85796 .05381 |
| .06 | .70112 .03467 | .71441 .03616 | .72808 .03785 | .74214 .0378 | .75657 .04200 | .77132 .04456 | .78632 .04753 | .80140 .05097 | .81633 .05493 | .83382 .05945 | .84453 .06448 |
| .07 | .69753 .03997 | .71037 .04160 | .72352 .04343 | .73695 .04549 | .75063 .04763 | .76452 .05048 | .77851 .05349 | .79248 .05630 | .80623 .06075 | .81956 .06502 | .83221 .06979 |
| .08 | .69364 .04509 | .70603 .04683 | .71866 .0487 | .73149 .05193 | .74449 .05334 | .75760 .05604 | .77073 .05906 | .78377 .06241 | .79656 .06612 | .80696 .07018 | .82073 .07457 |
| .09 | .68950 .05005 | .70146 .05188 | .71359 .05369 | .72586 .05611 | .73824 .05857 | .75066 .06123 | .76304 .06428 | .77529 .06756 | .78730 .07114 | .79853 .07501 | .81007 .07915 |
| .10 | .68517 .05484 | .69671 .05673 | .70837 .05880 | .72013 .06107 | .73134 .06354 | .74375 .06622 | .75546 .06920 | .76706 .07241 | .77840 .07566 | .79997 .07956 | .80350 |

$U/K + IV/K'$
 -1
 $IV + I = SN \quad \{A + H\}$

K=SIN 10

| B | A= .90 | A= .91 | A= .92 | A= .93 | A= .94 | A= .95 | A= .96 | A= .97 | A= .98 | A= .99 | A= 1.00 |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 0.00 | .71095 | .72599 | .74186 | .75671 | .77678 | .79634 | .81801 | .84251 | .87151 | .90921 | .00000 |
| | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .01 | .71060 | .72558 | .74137 | .75612 | .77633 | .79537 | .81694 | .84042 | .86779 | .90029 | .93589 |
| | .00736 | .00773 | .00818 | .00872 | .00939 | .01025 | .01140 | .01306 | .01572 | .02078 | .03222 |
| .02 | .70957 | .72437 | .73993 | .75637 | .77384 | .79255 | .81279 | .83483 | .85891 | .88462 | .90941 |
| | .01466 | .01540 | .01627 | .01732 | .01860 | .02021 | .02233 | .02524 | .02946 | .03591 | .04561 |
| .03 | .70789 | .72242 | .73762 | .75358 | .77042 | .78823 | .80712 | .82713 | .84867 | .86923 | .88913 |
| | .02106 | .02294 | .02419 | .02568 | .02748 | .02973 | .03251 | .03617 | .04103 | .04753 | .05590 |
| .04 | .70562 | .71980 | .73455 | .74994 | .76601 | .78280 | .80031 | .81843 | .83686 | .85503 | .87207 |
| | .02893 | .03030 | .03108 | .03374 | .03595 | .03861 | .04187 | .04591 | .05094 | .05716 | .06459 |
| .05 | .70263 | .71660 | .73085 | .74560 | .76037 | .77667 | .79246 | .80535 | .82545 | .84154 | .05705 |
| | .03582 | .03744 | .03930 | .04145 | .04397 | .04693 | .05045 | .05465 | .05965 | .06553 | .07226 |
| .06 | .69959 | .71292 | .72664 | .74075 | .75523 | .77004 | .78510 | .80024 | .81524 | .82979 | .84356 |
| | .04251 | .04435 | .04663 | .04861 | .05154 | .05470 | .05835 | .06259 | .06747 | .07302 | .07922 |
| .07 | .69597 | .70885 | .72203 | .73551 | .74925 | .76313 | .77724 | .79126 | .80507 | .81844 | .83125 |
| | .04901 | .05102 | .05327 | .05582 | .05869 | .06195 | .06567 | .06987 | .07460 | .07986 | .08552 |
| .08 | .69204 | .70447 | .71714 | .73001 | .74306 | .75622 | .76939 | .78248 | .79532 | .80776 | .81963 |
| | .05529 | .05744 | .05902 | .06248 | .06566 | .06873 | .07249 | .07663 | .08119 | .08619 | .09160 |
| .09 | .68787 | .69986 | .71203 | .72434 | .73675 | .74922 | .76164 | .77394 | .78598 | .79766 | .80864 |
| | .06136 | .06362 | .06610 | .06884 | .07197 | .07521 | .07890 | .08294 | .08735 | .09212 | .09722 |
| .10 | .68350 | .69507 | .70677 | .71856 | .73040 | .74225 | .75402 | .76564 | .77702 | .78805 | .79865 |
| | .06724 | .06957 | .07212 | .07451 | .07797 | .08139 | .08494 | .08889 | .09314 | .09771 | .10255 |

U/K+IV/K'
-1
U+IV=SN (A+B)

K=SIN 15

| B | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.00 |
|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| -0.00 | .70650 .00000 | .72364 .00000 | .73961 .00000 | .75658 .00000 | .77476 .00000 | .79451 .00000 | .81633 .00000 | .84104 .00000 | .87026 .00000 | .90335 .00000 | .100000 .00000 |
| .01 | .70815 .00851 | .72322 .00895 | .73911 .00947 | .75597 .01010 | .77401 .01088 | .79355 .01183 | .81494 .01322 | .83892 .01515 | .86653 .01624 | .89931 .01842 | .93526 .03742 |
| .02 | .70710 .01696 | .72200 .01783 | .73766 .01864 | .75420 .02006 | .77130 .02155 | .79065 .02343 | .81105 .02509 | .83327 .02927 | .85756 .03418 | .88348 .04169 | .90850 .05295 |
| .03 | .70540 .02536 | .72002 .02655 | .73532 .02801 | .75138 .02374 | .76833 .03194 | .78627 .03442 | .80531 .03770 | .82548 .04195 | .84659 .04761 | .86793 .05517 | .88800 .06489 |
| .04 | .70310 .03347 | .71736 .03506 | .73220 .03691 | .74769 .03908 | .76387 .04165 | .78074 .04477 | .79842 .04854 | .81607 .05324 | .83525 .05910 | .85357 .06634 | .87075 .07498 |
| .05 | .70027 .04144 | .71412 .04335 | .72845 .04550 | .74330 .04801 | .75867 .05093 | .7745 .05439 | .79088 .05649 | .80749 .06338 | .82412 .06920 | .84032 .07604 | .85552 .08387 |
| .06 | .69698 .04918 | .71039 .05132 | .72419 .05375 | .73838 .05552 | .75295 .05970 | .76782 .06333 | .78302 .06764 | .79827 .07257 | .81337 .07625 | .82803 .08472 | .84190 .09193 |
| .07 | .69332 .05669 | .70626 .05903 | .71552 .06106 | .73307 .06463 | .74689 .06798 | .76092 .07172 | .77505 .07611 | .78917 .08101 | .80307 .08552 | .81654 .09254 | .82934 .09935 |
| .08 | .68933 .06395 | .70182 .06445 | .71455 .06924 | .72750 .07234 | .74062 .07581 | .75387 .07961 | .77711 .08461 | .78028 .08883 | .79321 .09415 | .80573 .09926 | .81767 .10627 |
| .09 | .68510 .07097 | .69715 .07360 | .70937 .07650 | .72175 .07969 | .73423 .08323 | .74672 .08712 | .75926 .09142 | .77162 .09613 | .78374 .10127 | .79549 .10683 | .80674 .11276 |
| .10 | .68067 .07775 | .69227 .08043 | .70404 .08346 | .71588 .08571 | .72779 .09028 | .73961 .09417 | .75153 .09841 | .76321 .10301 | .77465 .10798 | .78575 .11330 | .79641 .11895 |

$U/K \approx IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 20

| B | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.00 |
|------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|------------------|------------------|-------------------|
| 0.00 | .70499 .00000 | .72025 .00000 | .73637 .00000 | .75350 .00000 | .77169 .00000 | .79165 .00000 | .81390 .00000 | .83890 .00000 | .86852 .00000 | .90707 .00000 | 1.00600 .00000 |
| .01 | .70463 .00962 | .71983 .01012 | .73586 .01071 | .75289 .01143 | .77111 .01232 | .79063 .01345 | .81249 .01498 | .83675 .01718 | .86471 .02070 | .89791 .02738 | .93434 .04251 |
| .02 | .70356 .01916 | .71858 .02015 | .73428 .02130 | .75108 .02269 | .76086 .02439 | .78792 .02654 | .80853 .02935 | .83101 .03319 | .85559 .03678 | .88184 .04732 | .90718 .06014 |
| .03 | .70183 .02857 | .71656 .03000 | .73200 .03167 | .74822 .03365 | .75533 .03604 | .76346 .03899 | .780270 .04272 | .802310 .04756 | .84446 .05400 | .86605 .06261 | .88676 .07317 |
| .04 | .69946 .03780 | .71386 .03952 | .72883 .04173 | .74445 .0420 | .76079 .04714 | .77787 .05067 | .79569 .05560 | .8114 .06036 | .83293 .06703 | .85145 .07527 | .86883 .08511 |
| .05 | .69659 .04680 | .71055 .04896 | .72500 .05144 | .73998 .05430 | .75549 .05764 | .77153 .06154 | .78601 .06625 | .80480 .07183 | .82160 .07847 | .83799 .08526 | .85341 .09519 |
| .06 | .69324 .05554 | .70675 .05799 | .72065 .06076 | .73497 .06392 | .74957 .06756 | .76472 .07175 | .78002 .07561 | .79541 .08224 | .81057 .08872 | .82546 .09609 | .83949 .10431 |
| .07 | .69950 .06401 | .70254 .06669 | .71590 .06969 | .72956 .07308 | .74349 .07691 | .75764 .08125 | .77191 .08519 | .78615 .09178 | .80019 .09806 | .81379 .10505 | .82671 .11271 |
| .08 | .68543 .07220 | .69301 .07507 | .71063 .07825 | .72388 .08179 | .73710 .08575 | .75044 .09313 | .76321 .09512 | .77710 .10062 | .79014 .10570 | .80277 .11335 | .81482 .12053 |
| .09 | .68111 .08012 | .69324 .08312 | .70554 .08644 | .71801 .09009 | .73058 .09413 | .74321 .09854 | .75581 .10349 | .76827 .10888 | .78049 .11475 | .79234 .12109 | .80368 .12789 |
| .10 | .67658 .08776 | .68827 .09088 | .70010 .09429 | .71242 .09801 | .72401 .10209 | .73600 .10653 | .74792 .11138 | .75970 .11664 | .78241 .12232 | .79315 .12839 | .813485 |

$U/K + IV/K'$
 -1
 $IV = SN \quad (A+IB)$

K=SIN 25

| | B | A=.90 | A=.91 | A=.92 | A=.93 | A=.94 | A=.95 | A=.96 | A=.97 | A=.98 | A=.99 | A=1.00 |
|------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|--------|
| 0.00 | .70031 .00000 | .71574 .00000 | .73204 .00000 | .74939 .00000 | .76802 .00000 | .78827 .00000 | .81065 .00000 | .83604 .00000 | .86614 .00000 | .89536 .00000 | .90000 .00000 | |
| .01 | .69994 .01073 | .71531 .01130 | .73153 .01197 | .74876 .01276 | .76723 .01379 | .78723 .01507 | .80920 .01680 | .83384 .01927 | .86226 .02324 | .89603 .03077 | .93310 .04780 | |
| .02 | .69884 .02136 | .71403 .02250 | .73001 .02361 | .74692 .02536 | .76492 .02730 | .78424 .02973 | .80516 .03289 | .82798 .03724 | .85295 .04353 | .87964 .05316 | .90539 .06760 | |
| .03 | .69706 .03188 | .71196 .03350 | .72756 .03539 | .74398 .03763 | .76132 .04033 | .77968 .04366 | .79920 .04737 | .81990 .05334 | .84158 .06061 | .86351 .07031 | .88415 .08280 | |
| .04 | .69465 .04216 | .70916 .04424 | .72432 .04663 | .74013 .04943 | .75666 .05274 | .77395 .05674 | .79203 .06163 | .81074 .06768 | .82980 .07521 | .84860 .08451 | .86624 .093562 | |
| .05 | .69169 .05221 | .70579 .05466 | .72040 .05747 | .73554 .06071 | .75124 .06449 | .76747 .0685 | .78417 .07422 | .80118 .08053 | .82622 .08802 | .83483 .09683 | .85048 .10691 | |
| .06 | .68825 .06195 | .70189 .06473 | .72040 .06787 | .73040 .07145 | .74527 .07557 | .76630 .08031 | .77558 .08581 | .79158 .09217 | .80703 .09949 | .82204 .10783 | .83623 .11712 | |
| .07 | .68441 .07139 | .69757 .07443 | .71105 .07783 | .72486 .08167 | .73894 .08601 | .75325 .09093 | .76768 .09652 | .78209 .10284 | .79630 .10995 | .81006 .11765 | .82314 .12651 | |
| .08 | .68023 .08051 | .69292 .08376 | .70586 .08737 | .71902 .09139 | .73238 .09538 | .74586 .10067 | .75938 .10649 | .77281 .11271 | .78598 .11959 | .79877 .12712 | .81096 .13525 | |
| .09 | .67579 .08932 | .68801 .09274 | .70043 .09650 | .71300 .10964 | .72569 .10522 | .73841 .11027 | .75116 .11583 | .76376 .12193 | .77610 .12058 | .7807 .13577 | .79953 .14346 | |
| .10 | .67114 .09763 | .68291 .10137 | .69483 .10524 | .70686 .10946 | .71894 .11408 | .73101 .11913 | .74307 .12462 | .75496 .13059 | .76659 .13702 | .77788 .14391 | .78873 .15123 | |

$U/K + IV/K^*$
 $U+IV=SN$ -2
 $\{A+18\}$

| $K = \sin 30$ | | | | | | | | | |
|---------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| B | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 |
| 0.00 | .69432 | .70935 | .72650 | .74412 | .76305 | .78366 | .80645 | .83235 | .86308 |
| | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .01 | .69393 | .70951 | .72597 | .74347 | .76224 | .78253 | .80497 | .83074 | .86359 |
| | .01190 | .01254 | .01330 | .01421 | .01535 | .01679 | .01873 | .02152 | .02597 |
| .02 | .69280 | .70819 | .72440 | .74157 | .75936 | .77952 | .80081 | .82407 | .84954 |
| | .02371 | .02497 | .02645 | .02822 | .03039 | .03312 | .03668 | .04157 | .04855 |
| 33 | .03 | .69097 | .70606 | .72188 | .73854 | .75614 | .77482 | .79468 | .81576 |
| | .03535 | .03717 | .03931 | .04183 | .04488 | .04861 | .05338 | .05954 | .06771 |
| .04 | .68848 | .70319 | .71853 | .73456 | .75135 | .76693 | .78730 | .80834 | .82574 |
| | .04675 | .04908 | .05178 | .05494 | .05868 | .06311 | .06870 | .07551 | .08400 |
| .05 | .68542 | .69969 | .71448 | .72984 | .74576 | .76224 | .77921 | .79650 | .81383 |
| | .05786 | .06063 | .06380 | .06746 | .07173 | .07670 | .08272 | .08962 | .09627 |
| .06 | .68186 | .69566 | .70988 | .72453 | .73961 | .75505 | .77077 | .78660 | .80231 |
| | .06865 | .07173 | .07534 | .07939 | .08403 | .08934 | .09559 | .10277 | .11103 |
| .07 | .67789 | .69119 | .70484 | .71881 | .73307 | .74757 | .76220 | .77682 | .79124 |
| | .07909 | .08252 | .08638 | .09072 | .09562 | .10115 | .10749 | .11462 | .12265 |
| .08 | .67357 | .68636 | .69946 | .71278 | .72630 | .73995 | .75364 | .76724 | .78061 |
| | .08917 | .09285 | .09693 | .10148 | .10656 | .11222 | .11855 | .12558 | .13335 |
| .09 | .66998 | .68131 | .69385 | .70555 | .71939 | .73229 | .74515 | .75790 | .77040 |
| | .09891 | .10277 | .10703 | .11172 | .11670 | .12261 | .12890 | .13579 | .14331 |
| .10 | .66416 | .67683 | .68806 | .70020 | .71241 | .72463 | .73679 | .74880 | .76057 |
| | .10830 | .11231 | .11669 | .12147 | .12673 | .13241 | .13863 | .14538 | .15266 |

A = 1.00

$U/K + IV/K'$
 -1
 $U+IV=SW \quad (A+B)$

K=SIN 35

| | | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.00 |
|------|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| 0.00 | | .68683 .00000 | .70272 .00000 | .71955 .00000 | .73750 .00000 | .75631 .00000 | .77784 .00000 | .80116 .00000 | .82767 .00000 | .85949 .00000 | .9036 .00000 | 1.00000 .00000 |
| .01 | | .68644 .01315 | .70226 .01368 | .71900 .01473 | .73682 .01577 | .75596 .01704 | .77673 .01861 | .79962 .02087 | .82534 .02400 | .85507 .02901 | .89049 .03651 | .92943 .05995 |
| .02 | | .68526 .02620 | .70083 .02762 | .71737 .02950 | .73485 .03130 | .75350 .03315 | .77356 .03683 | .79532 .04085 | .81911 .04635 | .84521 .05432 | .87314 .06648 | .90042 .08471 |
| 34 | | .68335 .03905 | .69867 .04112 | .71475 .04354 | .73170 .04039 | .74964 .04983 | .76863 .05407 | .78897 .05943 | .81051 .06637 | .83312 .07558 | .85603 .08786 | .87759 .10366 |
| .04 | | .68076 .05164 | .69569 .05429 | .71127 .05734 | .72758 .06091 | .74467 .06514 | .76251 .07023 | .78132 .07645 | .80076 .08414 | .82059 .09371 | .84016 .10550 | .85895 .11953 |
| .05 | | .67758 .06390 | .69204 .06704 | .70706 .07063 | .72266 .07477 | .73886 .07960 | .75561 .08528 | .77292 .09201 | .79056 .10004 | .80824 .10957 | .82549 .12077 | .84174 .13358 |
| .06 | | .67368 .07560 | .68785 .07935 | .70227 .08338 | .71715 .08796 | .73246 .09322 | .74811 .09926 | .76416 .10629 | .78029 .11440 | .79029 .12374 | .81182 .13436 | .82652 .14620 |
| .07 | | .66974 .08730 | .68320 .09120 | .69703 .09556 | .71119 .10548 | .72567 .10603 | .74031 .11233 | .75526 .11946 | .77013 .12754 | .78479 .13661 | .79900 .14671 | .81250 .15776 |
| .08 | | .66524 .09840 | .67820 .10257 | .69143 .10720 | .70492 .11236 | .71862 .11811 | .73247 .12453 | .74636 .13109 | .76017 .13655 | .77374 .14845 | .78689 .15808 | .79943 .16849 |
| .09 | | .66045 .10911 | .67291 .11349 | .68558 .11832 | .69844 .12364 | .71142 .12951 | .72443 .13591 | .73752 .14312 | .75044 .15093 | .76311 .15946 | .77539 .16867 | .78714 .17854 |
| .10 | | .65543 .11942 | .66741 .12397 | .67255 .12894 | .69181 .13438 | .70415 .14031 | .71651 .14673 | .72881 .15385 | .74096 .16150 | .75287 .16976 | .76441 .17861 | .77550 .18800 |

$U/K + I_1/K'$
 -1
 $J+IV=SN \quad (A+TB)$

K=SIN 40

| B | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.00 |
|-------|-------------------|------------------|------------------|------------------|------------------|------------------|--------------------|-------------------|------------------|------------------|-------------------|
| 0.003 | .67761 .00000 | .69379 .00000 | .71095 .00000 | .72928 .00000 | .74904 .00000 | .77060 .00000 | .79454 .00000 | .82182 .00000 | .85431 .00000 | .9663 .0000 | 1.00000 .00000 |
| .01 | .67719 .01451 | .69330 .01534 | .71037 .01631 | .72857 .01749 | .74815 .01894 | .76944 .02079 | .79294 .02327 | .81239 .02682 | .85003 .03247 | .86658 .04319 | .92663 .06734 |
| .62 | .67596 .02891 | .69106 .03053 | .70866 .03243 | .72650 .03471 | .74558 .03749 | .75612 .04098 | .78845 .04554 | .81290 .05176 | .83976 .06077 | .86654 .07451 | .89637 .09508 |
| .35 | .67396 .04309 | .68954 .04545 | .70592 .04819 | .72321 .05143 | .74154 .05534 | .76103 .06015 | .78182 .06622 | .80393 .07408 | .82717 .08450 | .85072 .09840 | .87291 .11626 |
| .04 | .67126 .05697 | .68641 .05998 | .70227 .06345 | .71839 .06751 | .73634 .07232 | .75467 .07810 | .777382 .088515 | .79374 .093867 | .81408 .10471 | .83417 .11807 | .85305 .13403 |
| .05 | .66790 .07048 | .68259 .07405 | .69786 .07813 | .71375 .08284 | .73026 .08633 | .74738 .09473 | .76505 .10243 | .78308 .11153 | .80117 .12235 | .81684 .13505 | .83548 .14959 |
| .06 | .664402 .08357 | .67819 .08761 | .69284 .09213 | .70797 .09741 | .72356 .10339 | .73956 .11028 | .75587 .11825 | .77233 .12746 | .78867 .13507 | .80454 .15014 | .81955 .16359 |
| .07 | .65950 .09621 | .67332 .10065 | .68734 .10562 | .70172 .11121 | .71643 .11753 | .73141 .12463 | .74655 .13261 | .76169 .14200 | .77662 .15232 | .79110 .16380 | .80486 .17638 |
| .08 | .65495 .10840 | .66806 .11315 | .68147 .11842 | .69514 .12429 | .70904 .13084 | .72303 .13815 | .73720 .14631 | .75124 .15538 | .76503 .16539 | .77840 .17636 | .79114 .18822 |
| .09 | .64992 .12014 | .66251 .12513 | .67532 .13064 | .68833 .13670 | .70148 .14339 | .71471 .15077 | .72793 .15889 | .74103 .16780 | .75387 .17751 | .76632 .18802 | .77822 .19927 |
| .10 | .64464 .13143 | .65673 .13662 | .66898 .14228 | .68137 .14848 | .69394 .15524 | .70634 .16263 | .71878 .17068 | .73107 .17941 | .74310 .18883 | .75478 .19893 | .76598 .20966 |

$\frac{U/K + IV/K}{J + IV = SN}$ ($A \approx 18$)
 $K = \sin 45^\circ$

| B | $A = .90$ | $A = .91$ | $A = .92$ | $A = .93$ | $A = .94$ | $A = .95$ | $A = .96$ | $A = .97$ | $A = .98$ | $A = .99$ | $A = 1.00$ |
|------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 0.00 | .66670 .00000 | .68281 .00000 | .70035 .00000 | .71912 .00000 | .73941 .00000 | .76160 .00000 | .78630 .00000 | .81450 .00000 | .84819 .00000 | .89240 .00000 | 1.00000 |
| .01 | .66586 .01602 | .68229 .01697 | .69974 .01808 | .71638 .01943 | .73848 .02108 | .76039 .02320 | .78460 .02602 | .81195 .03007 | .84369 .03651 | .88166 .04868 | .92354 .07608 |
| .02 | .66456 .03191 | .68077 .03377 | .69793 .03594 | .71520 .04631 | .73576 .04172 | .75608 .04572 | .77987 .05092 | .80512 .05602 | .83290 .06829 | .86273 .08392 | .89161 .10732 |
| .03 | .66244 .04755 | .67832 .05025 | .69504 .05339 | .71272 .05710 | .73150 .06157 | .75151 .06707 | .77289 .07401 | .79568 .08298 | .81966 .09488 | .84400 .11072 | .86694 .13108 |
| .04 | .65957 .06285 | .67501 .06629 | .69118 .07027 | .70815 .07491 | .72600 .08042 | .74677 .08503 | .76445 .09510 | .78493 .10507 | .80567 .11746 | .82657 .13272 | .84602 .15094 |
| .05 | .65604 .07771 | .67097 .08181 | .68652 .08646 | .70271 .09186 | .71956 .09817 | .73709 .10555 | .75510 .11431 | .77368 .12473 | .79225 .13711 | .81039 .15164 | .82748 .16828 |
| .06 | .55193 .09610 | .66632 .09674 | .68121 .10199 | .69660 .10797 | .71249 .11482 | .72882 .12272 | .74549 .13185 | .76232 .14241 | .77903 .15456 | .79527 .16839 | .81063 .18381 |
| .07 | .64734 .10598 | .66116 .11107 | .67538 .11677 | .68999 .12318 | .70495 .13043 | .72020 .13364 | .73562 .14795 | .75105 .15849 | .76628 .17033 | .78104 .18351 | .79506 .19795 |
| .08 | .64234 .11934 | .65560 .12479 | .65917 .13084 | .68302 .13757 | .69712 .14506 | .71133 .15347 | .72572 .16263 | .73998 .17324 | .75400 .18475 | .76757 .19735 | .78050 .21098 |
| .09 | .63701 .13213 | .64972 .13791 | .66255 .14422 | .67581 .15118 | .68912 .15895 | .70251 .16732 | .71589 .17665 | .72916 .18669 | .74216 .19806 | .75475 .21014 | .76678 .22309 |
| .10 | .63143 .14450 | .64360 .15045 | .65595 .15696 | .66844 .16406 | .68102 .17183 | .69363 .18032 | .70618 .18956 | .71859 .19060 | .73073 .21044 | .74249 .22206 | .75375 .23443 |

$U/K + IV/K'$
 -1
 $J + IV = SN \quad (A + [B])$

K=SIN 56

| B | A= .90 | A= .91 | A= .92 | A= .93 | A= .94 | A= .95 | A= .96 | A= .97 | A= .98 | A= .99 | A= 1.00 |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 0.00 | .65247 | .66933 | .68723 | .70557 | .72746 | .75039 | .77598 | .80531 | .84046 | .88677 | 1.00000 |
| | .00006 | .00000 | .00300 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .01 | .65200 | .66873 | .68664 | .70578 | .72647 | .74906 | .77418 | .80259 | .83569 | .87541 | .91932 |
| | .01770 | .01879 | .02008 | .02154 | .02355 | .02500 | .02926 | .03392 | .04133 | .05531 | .06672 |
| .02 | .65061 | .66716 | .68471 | .70345 | .72557 | .74535 | .76914 | .79533 | .82423 | .85533 | .88548 |
| | .03525 | .03740 | .03991 | .04292 | .04660 | .05121 | .05722 | .06541 | .07724 | .09523 | .12214 |
| 37 | .64035 | .66453 | .68162 | .69974 | .71902 | .73963 | .76169 | .78527 | .81014 | .83542 | .85925 |
| | .05251 | .05563 | .05926 | .06356 | .06873 | .07503 | .08310 | .09346 | .10719 | .12547 | .14895 |
| .04 | .64529 | .66101 | .67751 | .69486 | .71315 | .73241 | .75269 | .77301 | .79544 | .81684 | .83693 |
| | .06937 | .07336 | .07795 | .08333 | .08955 | .09734 | .10660 | .11820 | .13252 | .15017 | .17124 |
| .05 | .64152 | .65670 | .67253 | .69305 | .70629 | .72423 | .74279 | .76179 | .78089 | .80955 | .81711 |
| | .38574 | .09047 | .09566 | .10212 | .10930 | .11794 | .12603 | .14014 | .15447 | .17130 | .19059 |
| .06 | .63714 | .65173 | .66686 | .68252 | .69672 | .71539 | .73243 | .74964 | .76675 | .78537 | .79905 |
| | .10155 | .10691 | .11218 | .11990 | .12783 | .13537 | .14755 | .15979 | .17388 | .18991 | .20782 |
| .07 | .63224 | .64623 | .66064 | .67546 | .69066 | .70617 | .72187 | .73758 | .75309 | .76811 | .78234 |
| | .11677 | .12265 | .12924 | .13666 | .14505 | .15456 | .16535 | .17757 | .19131 | .20662 | .22341 |
| .08 | .62591 | .64029 | .65400 | .66902 | .68229 | .69674 | .71127 | .72573 | .73992 | .75366 | .76670 |
| | .13138 | .13763 | .14467 | .15246 | .16146 | .17089 | .18173 | .19380 | .20717 | .22161 | .23768 |
| .09 | .62124 | .63402 | .64706 | .66031 | .67573 | .68724 | .70075 | .71412 | .72722 | .73988 | .75195 |
| | .14532 | .15201 | .15930 | .16735 | .17624 | .18600 | .19687 | .20875 | .22172 | .23578 | .25086 |
| .10 | .61528 | .62749 | .63989 | .65243 | .66507 | .67776 | .69035 | .70279 | .71495 | .72671 | .73793 |
| | .15879 | .16566 | .17316 | .18140 | .19039 | .20022 | .21095 | .22260 | .23519 | .24871 | .26311 |

$U/K + IV/K$
 -1
 $U+IV=SN$ (A+IB)

K=SIN 55

| | | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.00 |
|------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|
| 0.00 | .63550 | .65272 | .67113 | .69097 | .71254 | .73630 | .76295 | .79363 | .83059 | .87953 | .1.00000 | .00000 |
| | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .01 | .63550 | .65213 | .67043 | .69011 | .71146 | .73490 | .76101 | .79070 | .82545 | .86334 | .91382 | .10009 |
| | .01956 | .02086 | .02237 | .02419 | .02643 | .02923 | .03312 | .03858 | .04723 | .06324 | .06324 | .10009 |
| .02 | .63350 | .65039 | .66836 | .68759 | .70833 | .73085 | .75557 | .78287 | .81311 | .84575 | .87745 | .14065 |
| | .03699 | .04150 | .04444 | .04796 | .05226 | .05767 | .06472 | .07432 | .08816 | .10919 | .10919 | .14065 |
| 38 | .63107 | .64756 | .66502 | .68359 | .70342 | .72463 | .74752 | .77200 | .79789 | .82426 | .84913 | .84913 |
| | .05896 | .06170 | .06594 | .06797 | .07703 | .08448 | .09388 | .10603 | .12213 | .14356 | .17111 | .17111 |
| .04 | .62778 | .64376 | .66058 | .67433 | .69708 | .71693 | .73779 | .75961 | .78199 | .80415 | .82495 | .82495 |
| | .07665 | .08130 | .08667 | .09296 | .10042 | .11037 | .12034 | .13387 | .15069 | .17142 | .19622 | .19622 |
| .05 | .62373 | .63912 | .65522 | .67206 | .68967 | .70803 | .72707 | .74659 | .76623 | .78540 | .80342 | .80342 |
| | .09466 | .10014 | .10650 | .11381 | .12232 | .13235 | .14424 | .15841 | .17526 | .19507 | .21781 | .21781 |
| .06 | .61902 | .63378 | .64911 | .66501 | .68149 | .69847 | .71595 | .73343 | .75089 | .76783 | .78377 | .78377 |
| | .11202 | .11827 | .12536 | .13344 | .14273 | .15345 | .16587 | .18025 | .19683 | .21572 | .23686 | .23686 |
| .07 | .61376 | .62786 | .64241 | .65740 | .67279 | .68859 | .70442 | .72036 | .73607 | .75125 | .76557 | .76557 |
| | .12868 | .13552 | .14322 | .15189 | .16171 | .1728 | .18552 | .19986 | .21605 | .23409 | .25392 | .25392 |
| .08 | .60804 | .62149 | .63527 | .64338 | .66375 | .67832 | .69296 | .70751 | .72177 | .73552 | .74853 | .74853 |
| | .14461 | .15194 | .16010 | .16919 | .17937 | .19075 | .20348 | .21766 | .23338 | .25064 | .26936 | .26936 |
| .09 | .60196 | .61475 | .62780 | .64108 | .65653 | .66805 | .68158 | .69494 | .70799 | .72056 | .73246 | .73246 |
| | .15983 | .16754 | .17603 | .18542 | .19581 | .20725 | .21997 | .23391 | .24916 | .26571 | .28350 | .28350 |
| .10 | .59559 | .60775 | .62011 | .63261 | .64520 | .65781 | .67034 | .68268 | .69470 | .70626 | .71721 | .71721 |
| | .17435 | .18233 | .19108 | .20165 | .21115 | .22226 | .23519 | .24884 | .26363 | .27953 | .29649 | .29649 |

$U/K + IV/K^*$
 $J \cdot iY = SN^{-1} (A + r \cdot B)$

X=SIN 60

| B | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.00 |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| 0.00 | .61458 | .63213 | .65099 | .67159 | .69359 | .71840 | .74626 | .77855 | .81772 | .87001 | 1.00000 |
| | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .01 | .61403 | .63149 | .65022 | .67045 | .69251 | .71685 | .74413 | .77534 | .81209 | .85670 | .90644 |
| | .02169 | .02320 | .02498 | .02714 | .02981 | .03323 | .03779 | .04431 | .05465 | .07407 | .11752 |
| .02 | .61241 | .62960 | .64796 | .66771 | .68909 | .71243 | .73815 | .76673 | .79855 | .83305 | .86660 |
| | .04316 | .04612 | .04961 | .05379 | .05891 | .06536 | .07377 | .08524 | .10179 | .12693 | .16453 |
| .03 | .60978 | .62652 | .64433 | .66334 | .68371 | .70565 | .72932 | .75479 | .78182 | .80941 | .83540 |
| | .06423 | .06852 | .07355 | .07951 | .08672 | .09560 | .10682 | .12136 | .14063 | .16631 | .19938 |
| .04 | .60622 | .62240 | .63950 | .65759 | .67678 | .69713 | .71863 | .74117 | .76431 | .79723 | .82087 |
| | .08472 | .09021 | .09656 | .10402 | .11268 | .12357 | .13664 | .15282 | .17297 | .19785 | .22768 |
| .05 | .60184 | .61737 | .63367 | .65176 | .66868 | .68742 | .70688 | .72685 | .74694 | .76653 | .78482 |
| | .10452 | .11102 | .11849 | .12713 | .13725 | .14918 | .16336 | .18030 | .20049 | .22427 | .25165 |
| .06 | .59675 | .61159 | .62703 | .64309 | .65976 | .67696 | .69458 | .71239 | .73005 | .74711 | .76305 |
| | .12353 | .13083 | .13924 | .14380 | .15981 | .17255 | .18733 | .20451 | .22435 | .24701 | .27244 |
| .07 | .59103 | .60519 | .61977 | .63482 | .65028 | .66608 | .68207 | .69805 | .71375 | .72883 | .74292 |
| | .14170 | .14974 | .15879 | .16903 | .18065 | .19387 | .20892 | .22602 | .24534 | .26694 | .29076 |
| .08 | .58493 | .59831 | .61205 | .62512 | .640+6 | .65498 | .66955 | .68398 | .69806 | .71153 | .72412 |
| | .15901 | .16759 | .17717 | .18788 | .19988 | .21335 | .22844 | .24530 | .26403 | .28464 | .30707 |
| .09 | .57840 | .59106 | .60400 | .61715 | .63046 | .64383 | .65715 | .67627 | .68299 | .69512 | .70646 |
| | .17546 | .18446 | .19441 | .20544 | .21766 | .23121 | .24619 | .26271 | .28062 | .30051 | .32172 |
| .10 | .57157 | .58355 | .59572 | .60801 | .62038 | .63273 | .64496 | .65693 | .66850 | .67951 | .68979 |
| | .19106 | .20037 | .21058 | .22180 | .23411 | .24762 | .26240 | .27852 | .29600 | .31484 | .33497 |

$U/K + IV/K'$
 $U+IV=SN^{-1} (A+B)$

K=SIN 65

| B | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.00 |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| 0.00 | .58856 | .60636 | .62555 | .64651 | .66954 | .69522 | .72444 | .75860 | .80048 | .85707 | 1.00000 |
| | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .01 | .58796 | .60566 | .62474 | .64547 | .66823 | .69350 | .72205 | .75500 | .79417 | .84218 | .89610 |
| | .02400 | .02581 | .02795 | .03055 | .03379 | .03794 | .04352 | .05152 | .06422 | .08806 | .14132 |
| .02 | .58620 | .60359 | .62226 | .64244 | .66443 | .68058 | .71537 | .74535 | .77695 | .81560 | .85128 |
| | .04775 | .05128 | .05546 | .06049 | .06669 | .07453 | .08480 | .09887 | .11921 | .15017 | .19558 |
| .03 | .58334 | .60024 | .61828 | .63763 | .65848 | .68104 | .70550 | .73196 | .76014 | .78894 | .81598 |
| | .07099 | .07611 | .08212 | .08929 | .09800 | .10878 | .12246 | .14026 | .16394 | .19560 | .23655 |
| .04 | .57946 | .59575 | .61299 | .63131 | .65082 | .67157 | .69359 | .71671 | .74046 | .76392 | .78565 |
| | .09354 | .10005 | .10764 | .11659 | .12727 | .14021 | .15610 | .17587 | .20059 | .23123 | .26814 |
| .05 | .57474 | .59028 | .60662 | .62362 | .64189 | .66082 | .68052 | .70073 | .72099 | .74061 | .75366 |
| | .11522 | .12293 | .13182 | .14216 | .15431 | .16871 | .18590 | .20652 | .23119 | .26038 | .29413 |
| .06 | .56925 | .58401 | .59940 | .61543 | .63239 | .64930 | .66690 | .68465 | .70214 | .71865 | .73417 |
| | .13595 | .14464 | .15456 | .16596 | .17913 | . | .21228 | .23308 | .25721 | .28487 | .31602 |
| .07 | .56315 | .57709 | .59153 | .60642 | .62173 | .63735 | .65312 | .66079 | .6805 | .69850 | .71169 |
| | .15565 | .16512 | .17583 | .18798 | .20182 | .21763 | .23570 | .25630 | .27964 | .30582 | .33475 |
| .08 | .55655 | .56969 | .58318 | .59700 | .61105 | .62524 | .63941 | .65334 | .66678 | .67940 | .69089 |
| | .17431 | .18438 | .19566 | .20431 | .22255 | .23856 | .25657 | .27674 | .291920 | .32398 | .35098 |
| .09 | .54957 | .56193 | .57452 | .58732 | .60023 | .61314 | .62592 | .63838 | .65030 | .66144 | .67155 |
| | .19192 | .20244 | .21411 | .22767 | .24149 | .25750 | .27527 | .29489 | .31643 | .33990 | .36518 |
| .10 | .54231 | .55391 | .56566 | .57752 | .58939 | .60118 | .61275 | .62395 | .63461 | .64452 | .65349 |
| | .20853 | .21935 | .23127 | .24438 | .25862 | .27469 | .29209 | .31110 | .33173 | .35397 | .37773 |

$U/K + IV/K'$
 $J + IV = \zeta_N$ $(A + "B")$
 -1

$K = \sin 70$

| | B | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.00 |
|------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| 0.00 | .55585 | .57370 | .59309 | .61437 | .63797 | .66456 | .69513 | .73137 | .77650 | .83866 | .100000 | .00000 |
| | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| .01 | .55521 | .57293 | .59217 | .61322 | .63550 | .66261 | .69241 | .72722 | .76919 | .82139 | .88064 | .17580 |
| | .02648 | .02665 | .03124 | .03441 | .03840 | .04356 | .05056 | .06068 | .07687 | .10743 | | |
| .02 | .55330 | .57067 | .58944 | .60386 | .63225 | .65706 | .68480 | .71614 | .75157 | .79046 | .82819 | |
| | .05264 | .05687 | .06191 | .06504 | .07555 | .08537 | .09821 | .11596 | .14184 | .18151 | .24141 | |
| .03 | .55021 | .56703 | .58507 | .60453 | .62562 | .64857 | .67361 | .70081 | .72987 | .75348 | .78678 | |
| | .07817 | .08426 | .09152 | .10022 | .11087 | .12414 | .14120 | .16353 | .19348 | .23386 | .28649 | |
| .04 | .54605 | .56216 | .57930 | .59759 | .61713 | .63799 | .66018 | .68348 | .70734 | .73060 | .75153 | |
| | .10283 | .11052 | .11969 | .13049 | .14349 | .15935 | .17899 | .20360 | .23460 | .27330 | .32021 | |
| .05 | .54097 | .55626 | .57238 | .58138 | .60729 | .62605 | .64557 | .66549 | .68528 | .70404 | .72063 | |
| | .12643 | .13557 | .14618 | .15360 | .17326 | .19080 | .21186 | .23727 | .26787 | .30425 | .34648 | |
| .06 | .53511 | .54952 | .56457 | .58027 | .59657 | .61337 | .63049 | .64759 | .66420 | .67963 | .69311 | |
| | .14884 | .15909 | .17086 | .18446 | .20027 | .21674 | .24038 | .26574 | .29526 | .32922 | .36750 | |
| .07 | .52862 | .54213 | .55612 | .57054 | .58533 | .60035 | .61539 | .63017 | .64426 | .65717 | .66834 | |
| | .17000 | .18111 | .19373 | .20612 | .22460 | .24350 | .26518 | .28999 | .31816 | .34979 | .38470 | |
| .08 | .52165 | .53427 | .54722 | .56045 | .57364 | .58728 | .60055 | .61340 | .62550 | .63646 | .64587 | |
| | .18988 | .20163 | .21483 | .22971 | .24651 | .26247 | .28685 | .31084 | .33757 | .36703 | .39903 | |
| .09 | .51431 | .52608 | .53805 | .55016 | .56231 | .57435 | .58612 | .59728 | .60788 | .61730 | .62534 | |
| | .20851 | .22070 | .23427 | .24939 | .26625 | .28503 | .30568 | .32893 | .35423 | .38170 | .41117 | |
| .10 | .50673 | .51768 | .52874 | .53984 | .55087 | .56170 | .57219 | .58243 | .59132 | .59951 | .60649 | |
| | .22592 | .23839 | .25215 | .26733 | .29407 | .30241 | .32271 | .34477 | .36868 | .39435 | .42162 | |

$U/K + IV/K'$
 $\frac{-1}{1}$
 $U+IV=SN$ (A+IB)

X=SIN 75

| | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.00 |
|------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|
| 0.00 | .51411 .00000 | .53161 .00000 | .55077 .00000 | .57196 .00000 | .59572 .00000 | .62281 .00000 | .65444 .00000 | .69263 .00000 | .74133 .00000 | .81060 .00000 | 1.00000 |
| .01 | .51343 .02898 | .53079 .03156 | .54976 .03469 | .57070 .03557 | .59408 .04351 | .62061 .05001 | .65129 .05857 | .68777 .07220 | .73253 .09319 | .78951 .13531 | .85498 .22959 |
| .02 | .51141 .05754 | .52837 .06258 | .54681 .06065 | .56702 .07611 | .58936 .08551 | .61431 .09767 | .64255 .11400 | .67475 .13697 | .71151 .17107 | .75192 .22427 | .79010 .30592 |
| .03 | .50815 .06533 | .52449 .09258 | .54211 .10125 | .56121 .11178 | .58204 .12482 | .60483 .14132 | .62982 .16272 | .65704 .19120 | .68603 .22993 | .71500 .29281 | .74014 .35236 |
| .04 | .50378 .11202 | .51932 .12118 | .53593 .13201 | .55370 .14499 | .57274 .16076 | .59312 .18071 | .61476 .20454 | .63738 .23535 | .66048 .27452 | .68161 .32374 | .69931 .36344 |
| .05 | .49846 .13740 | .51310 .14812 | .52857 .16065 | .54490 .17544 | .56210 .19307 | .58001 .21427 | .59867 .23994 | .61740 .27113 | .63554 .30845 | .65190 .35375 | .66498 .40595 |
| .06 | .49237 .16133 | .50605 .17327 | .52035 .18706 | .5323 .20309 | .55054 .22104 | .56644 .24383 | .58235 .26983 | .59796 .30332 | .61261 .33587 | .62546 .37661 | .63592 .42206 |
| .07 | .48567 .18373 | .4936 .19658 | .51152 .21124 | .52502 .22603 | .53879 .24734 | .55264 .26957 | .56631 .29514 | .57942 .32441 | .59146 .35759 | .60981 .39459 | .62496 .43496 |
| .08 | .47852 .20461 | .49029 .21809 | .50232 .23328 | .51454 .25047 | .52632 .26932 | .53901 .29192 | .55031 .31674 | .56194 .34455 | .57199 .37541 | .58052 .40915 | .58707 .44533 |
| .09 | .47106 .22400 | .49192 .23787 | .49293 .25335 | .50398 .27064 | .51496 .28994 | .52570 .31145 | .53598 .33531 | .54553 .36160 | .55406 .359030 | .56122 .42120 | .56620 .45333 |
| .10 | .46339 .24197 | .47342 .25f05 | .48348 .27161 | .49349 .28979 | .50333 .30775 | .51285 .32860 | .52196 .35142 | .53015 .37624 | .53746 .40296 | .54360 .43140 | .54929 .46123 |

$U/K + IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 30

| | 8 | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.00 |
|------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| 0.00 | .45945 | .47590 | .49404 | .51430 | .53726 | .56361 | .59537 | .63442 | .68597 | .76333 | 1.00000 | .00000 |
| .01 | .45876 | .47506 | .49380 | .51297 | .53551 | .56133 | .59181 | .62866 | .67511 | .73581 | .80469 | .31899 |
| .02 | .45673 | .47260 | .48996 | .50911 | .53047 | .5545* | .58201 | .61364 | .64987 | .6889* | .7215* | .39265 |
| .03 | .45346 | .46866 | .48513 | .50308 | .52273 | .54432 | .56803 | .59377 | .62066 | .64602 | .66441 | .42708 |
| .04 | .44909 | .46346 | .47684 | .49534 | .51304 | .53194 | .55191 | .57245 | .59244 | .60977 | .62147 | .44685 |
| .05 | .44382 | .45724 | .47142 | .48639 | .50211 | .51845 | .53512 | .55153 | .56669 | .57917 | .58731 | .45984 |
| .06 | .43781 | .45024 | .46321 | .47668 | .49054 | .50460 | .51851 | .53176 | .54356 | .55298 | .55902 | .46921 |
| .07 | .43126 | .44271 | .45450 | .46656 | .47875 | .49085 | .50254 | .51339 | .52282 | .53020 | .53492 | .47643 |
| .08 | .42432 | .43483 | .44552 | .45630 | .46702 | .47743 | .48240 | .49642 | .50414 | .51010 | .51394 | .48228 |
| .09 | .41713 | .42675 | .43643 | .44608 | .45554 | .4646* | .47314 | .48076 | .48721 | .49216 | .49538 | .48720 |
| .10 | .40980 | .41861 | .42738 | .43603 | .44442 | .45239 | .45975 | .47177 | .47598 | .47875 | .49146 | .46032 |

$U/K + IV/K'$
 $U+IV=SN^{-1}$ (A+IB)

K=STN 85

| B | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.00 |
|------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| 0.00 | .38262 .00000 | .39661 .00000 | .41256 .00000 | .43026 .00000 | .45052 .00000 | .47424 .00000 | .50291 .00000 | .53926 .00000 | .58921 .00000 | .67017 .00000 | 1.00000 .00000 |
| .01 | .38200 .03281 | .39604 .03617 | .41159 .04034 | .42301 .04565 | .44884 .05264 | .47185 .06225 | .49928 .07625 | .53311 .09843 | .57673 .13828 | .63452 .22512 | .68942 .44255 |
| .02 | .38016 .06504 | .39379 .07155 | .40878 .07956 | .42539 .10278 | .44403 .12039 | .46519 .14508 | .48947 .18163 | .51753 .23905 | .54936 .33271 | .58160 .47302 | .60132 .7302 |
| .03 | .37720 .09616 | .39021 .10544 | .40434 .11675 | .41978 .13079 | .43673 .14860 | .45539 .17177 | .47583 .20273 | .49776 .24518 | .51992 .30424 | .53890 .38470 | .54680 .68456 |
| .04 | .37328 .12577 | .38549 .13734 | .39859 .15125 | .41265 .16821 | .42772 .18920 | .44370 .21557 | .46054 .24916 | .47742 .29223 | .49311 .34704 | .50534 .41437 | .51138 .45120 |
| .05 | .36856 .15357 | .37990 .16694 | .39168 .18276 | .40451 .20117 | .41771 .22449 | .43133 .25225 | .44502 .28613 | .45812 .32734 | .46962 .37664 | .47814 .43361 | .48230 .49581 |
| .06 | .36322 .17943 | .37366 .19410 | .38453 .21120 | .39577 .23126 | .40726 .25489 | .41879 .28280 | .43000 .31571 | .44036 .35415 | .44911 .39824 | .45541 .44725 | .45852 .49942 |
| .07 | .35744 .20331 | .36698 .21885 | .37678 .23671 | .38675 .25728 | .39674 .28100 | .40654 .30834 | .41582 .33967 | .42416 .37519 | .43105 .41472 | .43595 .45756 | .43842 .50245 |
| .08 | .35134 .22524 | .36005 .24131 | .36887 .25951 | .37711 .28024 | .38641 .30349 | .39478 .32986 | .40256 .35940 | .41000 .39022 | .41500 .42778 | .41895 .46575 | .42100 .50512 |
| .09 | .34507 .24534 | .35299 .25165 | .36092 .27988 | .36877 .30726 | .37639 .32297 | .38361 .34615 | .39022 .37590 | .40060 .43845 | .40388 .47251 | .40564 .50755 | |
| .10 | .33870 .26373 | .34592 .28006 | .35307 .29812 | .36005 .31004 | .36676 .33994 | .37300 .36390 | .37873 .38991 | .38036 .41762 | .38756 .44740 | .39036 .47824 | .39191 .50981 |

$U/K+IV/K'$
 -1
 $I+IV=SN \quad (A+rR)$

K=SIN 86

| B | A = .96 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.0j |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| .00 | .36229 .00003 | .37579 .00000 | .39078 .00000 | .40765 .00000 | .42698 .00000 | .44967 .00000 | .47712 .00000 | .51209 .00000 | .56047 .00000 | .64006 .00000 | 1.00000 .00000 |
| .01 | .36169 .03302 | .37505 .03642 | .38985 .04066 | .40645 .04606 | .42536 .05319 | .44734 .06302 | .47359 .07741 | .50605 .0835 | .54803 .14195 | .60362 .23383 | .65319 .46321 |
| .02 | .35993 .06545 | .37290 .07204 | .38715 .08317 | .40297 .09045 | .42072 .10380 | .44089 .12178 | .46406 .14708 | .4908~ .18466 | .52111 .24393 | .55136 .34065 | .56858 .43381 |
| .03 | .35711 .09674 | .36946 .10614 | .38289 .11760 | .39757 .13186 | .41370 .14997 | .43144 .17354 | .45086 .20517 | .47166 .24856 | .49254 .30894 | .51870 .39094 | .549184 .49184 |
| .04 | .35336 .12650 | .36495 .13821 | .37739 .15230 | .39074 .16350 | .40504 .19030 | .42025 .21759 | .43614 .25174 | .45207 .29554 | .46676 .35121 | .47801 .41938 | .48324 .49666 |
| .05 | .34805 .15442 | .35960 .16794 | .37097 .18394 | .38294 .20309 | .39545 .22621 | .40834 .25434 | .42125 .28868 | .43357 .33043 | .44430 .38030 | .45211 .43774 | .45572 .50018 |
| .06 | .34375 .18037 | .35364 .19519 | .36394 .21247 | .37458 .23275 | .38545 .25665 | .39634 .28484 | .40690 .31815 | .41560 .35699 | .42474 .40145 | .43052 .45075 | .43323 .50307 |
| .07 | .33823 .20431 | .34727 .22000 | .35655 .23803 | .36597 .25879 | .37541 .28275 | .38464 .31035 | .39337 .34197 | .40118 .37777 | .40757 .41756 | .41206 .46060 | .41422 .50558 |
| .08 | .33242 .22629 | .34066 .24249 | .34900 .25085 | .35734 .28165 | .36555 .30520 | .3734~ .33179 | .38074 .36154 | .38716 .39449 | .39234 .43032 | .39956 .46843 | .39776 .50786 |
| .09 | .32645 .24641 | .33394 .25284 | .34143 .28122 | .34884 .30174 | .35602 .32462 | .36281 .34993 | .36900 .37789 | .37437 .40825 | .37867 .44075 | .38166 .47790 | .38324 .50999 |
| .10 | .32035 .26480 | .32724 .28125 | .33396 .29943 | .34054 .31948 | .34686 .34153 | .35275 .36561 | .35809 .39177 | .36266 .41981 | .36631 .44950 | .36886 .48041 | .37026 .51231 |

U/K^+
 IV/K^+
 -1
 $J+IV=SN$ (A+IB)

K=SIN 87

| | | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.00 |
|------|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 0.90 | | .35881 .00090 | .35146 .00050 | .36556 .00000 | .38142 .00000 | .39960 .00000 | .42096 .00000 | .44630 .00000 | .48002 .00000 | .52610 .00000 | .60294 .00000 | 1.00000 |
| .01 | | .33525 .03319 | .35079 .03663 | .36466 .04091 | .38028 .04639 | .39806 .05363 | .41875 .06364 | .44352 .07635 | .47420 .10151 | .51398 .14500 | .56656 .24122 | .61065 .47984 |
| .02 | | .33659 .06577 | .34875 .07243 | .36213 .08066 | .37598 .09107 | .39366 .10462 | .41262 .12290 | .43442 .14863 | .45961 .16712 | .48802 .24769 | .51605 .34706 | .53102 .49227 |
| .03 | | .33392 .09120 | .34551 .06669 | .35811 .11028 | .37188 .13271 | .38701 .15107 | .40365 .17502 | .42187 .20712 | .44134 .25127 | .46078 .31259 | .47690 .39590 | .48433 .49500 |
| .04 | | .33039 .12237 | .34126 .13890 | .35291 .15313 | .36542 .17051 | .37882 .19207 | .39307 .21920 | .40792 .25380 | .42278 .29218 | .43638 .35452 | .44665 .42331 | .45118 .50091 |
| .05 | | .32614 .15509 | .33522 .16872 | .34686 .16455 | .35806 .20421 | .36977 .22757 | .38181 .25600 | .39385 .29070 | .40531 .33287 | .42233 .38318 | .44698 .42331 | .45359 |
| .06 | | .32235 .16111 | .33060 .19605 | .34023 .21347 | .35018 .23392 | .36034 .25803 | .37050 .28652 | .38035 .32007 | .38933 .35921 | .39684 .40396 | .40446 .45349 | .40590 |
| .07 | | .31615 .20510 | .32461 .22091 | .33328 .23906 | .34208 .25999 | .35049 .28413 | .35950 .31191 | .36761 .34377 | .37494 .37980 | .38013 .41919 | .38481 .46297 | .38671 .40601 |
| .08 | | .31070 .22711 | .31839 .24342 | .32618 .26189 | .33197 .28284 | .34162 .30655 | .34897 .33323 | .35572 .36312 | .36168 .39633 | .36645 .43231 | .36974 .47052 | .37135 .50399 |
| .09 | | .30506 .24724 | .31208 .25378 | .31907 .28226 | .32598 .30291 | .33267 .32591 | .33898 .35142 | .34673 .37946 | .34970 .40993 | .35355 .44254 | .35640 .47676 | .35778 .51168 |
| .10 | | .29940 .26565 | .30576 .28218 | .31205 .30046 | .31119 .32061 | .32408 .34217 | .32956 .36693 | .33450 .39323 | .33873 .42137 | .34208 .45113 | .34443 .48209 | .34565 .51371 |

$$U/K + IV/K \stackrel{-1}{\longrightarrow} U + IV = SW \quad (A+IB)$$

K-SIN 88

| B | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 |
|--------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .0 .30 | .31021 .00000 | .32184 .00000 | .33476 .00000 | .34934 .00000 | .36606 .00000 | .36572 .00000 | .40964 .00000 | .44025 .00000 | .48301 .00000 | .55509 .00000 |
| .0 .4 | .30969 .03330 | .32120 .03677 | .33395 .04109 | .34828 .04662 | .36463 .05395 | .38368 .06410 | .40649 .07904 | .43480 .10307 | .47156 .14729 | .52008 .24686 |
| .0 .2 | .30816 .06660 | .31932 .07271 | .33160 .08101 | .34524 .09152 | .36056 .10522 | .37790 .12372 | .39803 .14987 | .42119 .18892 | .44726 .25082 | .47272 .35177 |
| .0 .3 | .30570 .09753 | .31633 .10709 | .32769 .11678 | .34053 .13333 | .35441 .15186 | .36969 .17607 | .38640 .20655 | .40424 .25324 | .42197 .31543 | .43650 .39948 |
| .0 .4 | .30245 .12740 | .31241 .13939 | .32310 .15373 | .33457 .17125 | .34666 .19299 | .35991 .20336 | .37351 .25529 | .38706 .30008 | .39944 .35691 | .40867 .42614 |
| .0 .5 | .298654 .15557 | .30777 .16929 | .31752 .18555 | .32779 .20502 | .33851 .22655 | .34953 .25719 | .36054 .29216 | .37098 .33463 | .37996 .38525 | .38906 .44330 |
| .0 .6 | .29413 .18164 | .30261 .19667 | .31143 .21420 | .32054 .23477 | .32983 .25903 | .33912 .28770 | .34809 .32146 | .35628 .36082 | .36303 .40577 | .36985 .45545 |
| .0 .7 | .26936 .20567 | .29710 .22155 | .30543 .23981 | .31305 .26085 | .32114 .28512 | .32899 .31307 | .33639 .34507 | .34297 .36125 | .34831 .42118 | .35361 .46467 |
| .0 .8 | .20434 .22770 | .29138 .24409 | .29851 .26265 | .30563 .28369 | .31262 .30751 | .31932 .33437 | .32550 .36443 | .33089 .39765 | .33510 .43372 | .33955 .47201 |
| .0 .9 | .27916 .24785 | .28553 .26445 | .29193 .28301 | .29829 .30374 | .30439 .32684 | .31016 .35244 | .31539 .36058 | .31950 .41114 | .32348 .41114 | .32594 .47810 |
| .0 .10 | .27395 .266625 | .27978 .28285 | .28553 .30119 | .29114 .32143 | .29651 .34366 | .30151 .36795 | .30601 .39427 | .30985 .42248 | .31288 .45230 | .31498 .48329 |

$U/K+IV/K^*$
 ≈ 1
 $U+IV=SN \quad (A+IB)$

K=SIN 89

| B | A = .90 | A = .91 | A = .92 | A = .93 | A = .94 | A = .95 | A = .96 | A = .97 | A = .98 | A = .99 | A = 1.00 |
|------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| 0.00 | .27084 .00006 | .28101 .00000 | .29231 .00000 | .30506 .00000 | .31970 .00000 | .33693 .00000 | .35789 .00000 | .38477 .00000 | .42243 .00000 | .48632 .00009 | 1.00000 .00000 |
| .01 | .27038 .03338 | .28044 .03686 | .29160 .04120 | .30414 .04677 | .31845 .05414 | .33513 .06437 | .35512 .07946 | .37995 .10379 | .41223 .14671 | .45476 .25039 | .48747 .49917 |
| .02 | .26904 .06614 | .27880 .07268 | .28953 .06122 | .30147 .09179 | .31487 .10558 | .33013 .12422 | .34767 .15059 | .36793 .19003 | .39072 .25261 | .41254 .35465 | .42371 .50197 |
| .03 | .26689 .09773 | .27618 .10733 | .28628 .11907 | .29733 .13370 | .30947 .15234 | .32283 .17675 | .33744 .20941 | .35301 .25444 | .36846 .31710 | .38103 .40166 | .38641 .50397 |
| .04 | .26404 .12774 | .27275 .13969 | .28200 .15409 | .29211 .17170 | .30284 .19354 | .31425 .22107 | .32612 .25619 | .33794 .30124 | .34869 .35836 | .35995 .42185 | .36666 .50576 |
| .05 | .26062 .15586 | .26868 .16963 | .27720 .18596 | .28616 .20551 | .29552 .22915 | .30514 .25792 | .31474 .29305 | .32383 .33570 | .33163 .36650 | .33713 .44470 | .33943 .50747 |
| .06 | .25676 .18196 | .26416 .19704 | .27186 .21463 | .27981 .23528 | .28792 .25964 | .29607 .28841 | .30384 .32229 | .31056 .36178 | .31686 .40686 | .32093 .45663 | .32267 .50914 |
| .07 | .25258 .21601 | .25933 .22195 | .26626 .24026 | .27329 .26137 | .28031 .28572 | .28716 .31176 | .29530 .34685 | .29932 .38213 | .31056 .42234 | .32093 .46569 | .30850 .51079 |
| .08 | .24819 .22805 | .25433 .24449 | .26055 .26310 | .26676 .28420 | .27286 .30009 | .27869 .33503 | .28407 .36516 | .28876 .39845 | .29250 .43459 | .29504 .47291 | .29623 .51242 |
| .09 | .24368 .24621 | .24926 .26485 | .25484 .28346 | .26034 .30425 | .26566 .32740 | .27008 .35306 | .27524 .38126 | .27915 .41187 | .28226 .44460 | .28438 .47690 | .28541 .51404 |
| .10 | .23911 .26662 | .24419 .28325 | .24920 .30164 | .25409 .32191 | .25877 .34419 | .26312 .36853 | .26703 .39490 | .27037 .42315 | .27300 .45300 | .27462 .48402 | .27574 .51566 |

U/K+IV/K'
-1
U+IV=SN (A+B)

K=SIN 5

| | | A = 7.00 | A = +2.0 | A = -2.0 | A = +3.0 | A = +4.0 | A = +5.0 | A = +6.0 | A = +7.0 | A = +8.0 | A = +9.0 | A = +10.0 |
|-----|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| .01 | *00000 | *02007 | *00014 | *00022 | *00029 | *00036 | *00043 | *00051 | *00058 | *00065 | *00072 | *00072 |
| | .97512 | .97312 | .97012 | .97012 | .97012 | .97012 | .97012 | .97012 | .97012 | .97012 | .97012 | .97012 |
| .02 | *00000 | *00028 | *00057 | *00065 | *00114 | *00142 | *00170 | *00199 | *00227 | *00256 | *00284 | *00284 |
| | .94063 | .94063 | .94063 | .94063 | .94064 | .94064 | .94064 | .94064 | .94064 | .94065 | .94065 | .94065 |
| .03 | *00000 | *00062 | *00124 | *00186 | *00248 | *00310 | *00372 | *0434 | *00496 | *00558 | *00620 | |
| | .91187 | .91187 | .91187 | .91187 | .91188 | .91188 | .91189 | .91189 | .91190 | .91191 | .91193 | .91194 |
| .04 | *00000 | *00106 | *00212 | *00318 | *00424 | *00529 | *00635 | *00741 | *00847 | *00952 | *01058 | |
| | .88410 | .88411 | .88411 | .88412 | .88413 | .88414 | .88416 | .88418 | .88421 | .88423 | .88425 | |
| .05 | *00000 | *00156 | *00316 | *00474 | *00631 | *00749 | *00947 | *01104 | *01262 | *01419 | *01576 | |
| | .85753 | .85753 | .85754 | .85755 | .85757 | .85760 | .85763 | .85767 | .85771 | .85776 | .85781 | |
| .06 | *00000 | *00216 | *00432 | *00647 | *00863 | *01078 | *01294 | *01509 | *01724 | *01938 | *02153 | |
| | .83225 | .83225 | .83226 | .83226 | .83229 | .83232 | .83235 | .83241 | .83246 | .83253 | .83261 | .83269 |
| .07 | *00000 | *00276 | *00556 | *00833 | *01111 | *01383 | *01665 | *01942 | *02218 | *02495 | *02770 | |
| | .80829 | .80830 | .80832 | .80835 | .80839 | .80845 | .80852 | .80861 | .80870 | .80881 | .80893 | |
| .08 | *00000 | *00343 | *00685 | *01028 | *01370 | *01712 | *02053 | *02394 | *02735 | *03075 | *03414 | |
| | .78566 | .78567 | .78569 | .78573 | .78590 | .78597 | .78608 | .78621 | .78636 | .78652 | | |
| .09 | *00000 | *00409 | *00818 | *01227 | *01636 | *02044 | *02451 | *02858 | *03264 | *03670 | *04074 | |
| | .76429 | .76431 | .76434 | .76439 | .76447 | .76457 | .76470 | .76484 | .76501 | .76520 | .76541 | |
| .10 | *00000 | *00477 | *00953 | *01429 | *01905 | *02380 | *02855 | *03326 | *03801 | *04273 | *04743 | |
| | .74414 | .74415 | .74419 | .74426 | .74436 | .74449 | .74464 | .74482 | .74503 | .74526 | .74552 | |

U/K+IV/K'
-1
U+IV=SN (A+B)

K=SIN 10

| | | A = 0, 00 | A = .10 | A = .20 | A = .30 | A = .40 | A = .50 | A = .60 | A = .70 | A = .80 | A = .90 | A = 1.00 |
|-----|--------|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| .01 | .00000 | .00004 | .00007 | .00011 | .00015 | .00019 | .00022 | .00025 | .00029 | .00033 | .00036 | |
| | .98175 | .98175 | .98175 | .98175 | .98175 | .98175 | .98175 | .98175 | .98175 | .98175 | .98175 | |
| .02 | .00000 | .00014 | .00029 | .00043 | .00058 | .00072 | .00087 | .00101 | .00116 | .00130 | .00144 | |
| | .96356 | .96356 | .96356 | .96356 | .96356 | .96356 | .96356 | .96356 | .96356 | .96357 | .96357 | |
| .03 | .00000 | .00032 | .00065 | .00097 | .00129 | .00161 | .00193 | .00226 | .00258 | .00290 | .00322 | |
| | .94549 | .94549 | .94549 | .94549 | .94550 | .94550 | .94551 | .94551 | .94552 | .94553 | .94554 | |
| 50 | .01 | .00000 | .00057 | .00113 | .00170 | .00227 | .00283 | .00340 | .00396 | .00453 | .00510 | .00565 |
| | .92760 | .92760 | .92761 | .92761 | .92762 | .92763 | .92764 | .92766 | .92767 | .92769 | .92771 | |
| .05 | .00000 | .00007 | .00175 | .00262 | .00349 | .00436 | .00523 | .00610 | .00697 | .00784 | .00871 | |
| | .90994 | .90995 | .90995 | .90996 | .90996 | .90996 | .91000 | .91002 | .91005 | .91008 | .91011 | |
| .66 | .00000 | .00124 | .00247 | .00371 | .00494 | .00617 | .00741 | .00864 | .00987 | .01109 | .01232 | |
| | .69256 | .69256 | .69256 | .69259 | .69259 | .69262 | .69265 | .69269 | .69273 | .69279 | .69285 | |
| .07 | .00000 | .00165 | .00330 | .00495 | .00659 | .00822 | .00988 | .01152 | .01316 | .01480 | .01643 | |
| | .87550 | .87550 | .87552 | .87554 | .87556 | .87563 | .87569 | .87576 | .87584 | .87593 | .87603 | |
| .08 | .00000 | .00211 | .00422 | .00632 | .00843 | .01053 | .01263 | .01472 | .01681 | .01889 | .02097 | |
| | .85879 | .85879 | .85861 | .85385 | .85890 | .85897 | .85905 | .85915 | .85927 | .85940 | .85954 | |
| .09 | .00000 | .00251 | .00521 | .01781 | .01041 | .01301 | .01560 | .01819 | .02076 | .02334 | .02590 | |
| | .84245 | .84245 | .84253 | .84263 | .84271 | .84281 | .84295 | .84312 | .84328 | .84346 | .84364 | |
| .10 | .00000 | .00314 | .00627 | .00941 | .01253 | .01563 | .01877 | .02108 | .02498 | .02807 | .03114 | |
| | .82650 | .82650 | .82661 | .82661 | .82671 | .82683 | .82698 | .82716 | .82736 | .82759 | .82785 | |

$$U + IV = S \cup N(A + IV)$$

K=SIN 15

| | | A= .00 | A= .1C | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= .99 | A=1.00 |
|-----|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------|
| 1/8 | | | | | | | | | | | | | |
| .61 | *.00000 .98605 | *.00002 .98605 | *.00005 .98605 | *.00007 .98605 | *.00010 .98605 | *.00012 .98605 | *.00014 .98605 | *.00017 .98605 | *.00019 .98605 | *.00022 .98605 | *.00024 .98605 | | |
| .02 | *.00010 .97211 | *.00019 .97211 | *.00029 .97211 | *.00039 .97212 | *.00048 .97212 | *.00053 .97212 | *.00062 .97212 | *.00077 .97212 | *.00087 .97212 | *.00096 .97212 | *.00096 .97212 | | |
| .03 | *.00000 .95823 | *.00002 .95823 | *.000043 .95823 | *.000055 .95823 | *.000065 .95823 | *.000086 .95823 | *.000108 .95823 | *.000130 .95824 | *.000151 .95824 | *.000173 .95825 | *.000194 .95826 | *.000216 .95826 | |
| .51 | *.00000 .94440 | *.000038 .94440 | *.000076 .94441 | *.000115 .94441 | *.000153 .94442 | *.000191 .94442 | *.000229 .94442 | *.000267 .94444 | *.000305 .94446 | *.000343 .94447 | *.000381 .94449 | | |
| .04 | *.00000 .93065 | *.000059 .93067 | *.000119 .93067 | *.000178 .93068 | *.000237 .93069 | *.000296 .93071 | *.000355 .93073 | *.000414 .93075 | *.000473 .93077 | *.000532 .93077 | *.000591 .93083 | | |
| .06 | *.00000 .91703 | *.000085 .91704 | *.000169 .91704 | *.000254 .91706 | *.000338 .91706 | *.000423 .91710 | *.000507 .91714 | *.000591 .91717 | *.000676 .91722 | *.000760 .91726 | *.000843 .91732 | | |
| .07 | *.00000 .90352 | *.000114 .90353 | *.000226 .90354 | *.000342 .90356 | *.000456 .90360 | *.000570 .90364 | *.000683 .90368 | *.000797 .90374 | *.000910 .90381 | *.001023 .90385 | *.01136 .90397 | | |
| .08 | *.00000 .89016 | *.000147 .89016 | *.000245 .89018 | *.000442 .89021 | *.000589 .89026 | *.000736 .89032 | *.000832 .89039 | *.01029 .89047 | *.01175 .89057 | *.01320 .89068 | *.01465 .89080 | | |
| .05 | *.00000 .86391 | *.000184 .86390 | *.000368 .86395 | *.000552 .86401 | *.000736 .86409 | *.000919 .86420 | *.01103 .86433 | *.01225 .86443 | *.01467 .86457 | *.01649 .86467 | *.01829 .86476 | *.01929 .86478 | |
| .10 | *.00000 .86391 | *.000244 .86390 | *.000449 .86395 | *.000673 .86401 | *.000896 .86409 | *.01120 .86417 | *.01342 .86420 | *.01564 .86433 | *.01785 .86443 | *.02006 .86457 | *.02225 .86469 | *.02425 .86479 | |

$U/K + IV/K'$
 -1
 $U+IV=SN \quad (A+IG)$

K=SIN 20

| 1/B | A= 0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|-----|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| | | | | | | | | | | | |
| .01 | .00000 | .00002 | .00004 | .00005 | .00007 | .00009 | .00011 | .00013 | .00014 | .00016 | .00018 |
| | .96833 | .96833 | .96833 | .96833 | .96833 | .96833 | .96833 | .96833 | .96833 | .96833 | .96833 |
| .02 | .00000 | .00007 | .00014 | .00022 | .00029 | .00036 | .00043 | .00050 | .00058 | .00065 | .00072 |
| | .97667 | .97667 | .97667 | .97667 | .97667 | .97667 | .97667 | .97667 | .97667 | .97667 | .97667 |
| .03 | .00000 | .00016 | .00032 | .00049 | .00065 | .00081 | .00097 | .00113 | .00129 | .00145 | .00162 |
| | .96503 | .96503 | .96503 | .96503 | .96503 | .96503 | .96504 | .96504 | .96505 | .96505 | .96506 |
| 52 | .04 | .00000 | .00029 | .00057 | .00086 | .00115 | .00143 | .00172 | .00200 | .00229 | .00258 |
| | .95342 | .95342 | .95343 | .95343 | .95343 | .95343 | .95344 | .95345 | .95346 | .95347 | .95348 |
| .05 | .00000 | .00045 | .00089 | .00134 | .00178 | .00223 | .00267 | .00312 | .00356 | .00401 | .00445 |
| | .94181 | .94186 | .94187 | .94187 | .94188 | .94190 | .94191 | .94193 | .94195 | .94196 | .94200 |
| .06 | .00000 | .00064 | .00123 | .00192 | .00255 | .00319 | .00383 | .00446 | .00510 | .00573 | .00637 |
| | .93035 | .93035 | .93036 | .93037 | .93039 | .93041 | .93044 | .93047 | .93051 | .93055 | .93060 |
| .07 | .00000 | .00086 | .00173 | .00259 | .00345 | .00432 | .00518 | .00604 | .00689 | .00775 | .00860 |
| | .91694 | .91694 | .91692 | .91694 | .91697 | .91700 | .91705 | .91709 | .91715 | .91722 | .91729 |
| .08 | .00000 | .00112 | .00224 | .00336 | .00448 | .00560 | .00671 | .00782 | .00893 | .01004 | .01114 |
| | .90754 | .90754 | .90756 | .90759 | .90763 | .90768 | .90774 | .90781 | .90790 | .90799 | .90810 |
| .09 | .00000 | .00141 | .00282 | .00422 | .00563 | .00703 | .00843 | .00982 | .01121 | .01260 | .01398 |
| | .89625 | .89626 | .89626 | .89632 | .89638 | .89645 | .89653 | .89663 | .89675 | .89689 | .89703 |
| .10 | .00000 | .00172 | .00345 | .00517 | .00688 | .00860 | .01031 | .01201 | .01371 | .01540 | .01706 |
| | .88506 | .88506 | .88509 | .88515 | .88522 | .88532 | .88543 | .88557 | .88573 | .88591 | .88611 |

$U/K + IV/K'$
 -1
 $U + IV = SN$ (A+IB)

K=5 IN 25

| | A= 0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .01 | .00000 .98975 | .00001 .90975 | .00003 .58975 | .00004 .98975 | .00006 .93975 | .00007 .98975 | .00009 .98975 | .00010 .98975 | .00011 .98975 | .00013 .98975 | .00014 .98975 |
| .02 | .00000 .97951 | .00006 .97951 | .00011 .97951 | .00017 .97951 | .00023 .97951 | .00029 .97951 | .00034 .97951 | .00046 .97952 | .00046 .97952 | .00052 .97952 | .00057 .97952 |
| .03 | .00000 .96928 | .00013 .96928 | .00026 .96929 | .00039 .96929 | .00051 .96929 | .00054 .96929 | .00064 .96929 | .00077 .96929 | .00090 .96930 | .00103 .96930 | .00116 .96931 |
| .04 | .00000 .95908 | .00023 .95908 | .00046 .95908 | .00069 .95908 | .00091 .95909 | .00114 .95909 | .00137 .95910 | .00160 .95911 | .00183 .95912 | .00205 .95913 | .00220 .95914 |
| .05 | .00000 .94890 | .00036 .94890 | .00071 .94890 | .00107 .94891 | .00142 .94892 | .00178 .94693 | .00213 .94894 | .00249 .94896 | .00284 .94898 | .00320 .94900 | .00355 .94902 |
| .06 | .00000 .93875 | .00051 .93875 | .00102 .93876 | .00153 .93877 | .00204 .93878 | .00255 .93880 | .00306 .93883 | .00357 .93886 | .00408 .93886 | .00456 .93892 | .00509 .93896 |
| .07 | .00000 .92864 | .00069 .92864 | .00136 .92865 | .00208 .92867 | .00277 .92870 | .00346 .92873 | .00414 .92876 | .00483 .92881 | .00552 .92886 | .00620 .92892 | .00689 .92896 |
| .08 | .00000 .91858 | .00090 .91858 | .00180 .91860 | .00270 .91862 | .00355 .91866 | .00449 .91866 | .00538 .91870 | .00628 .91876 | .00717 .91882 | .00806 .91886 | .00894 .91898 |
| .09 | .00000 .90857 | .00113 .90857 | .00226 .90860 | .00339 .90863 | .00452 .90868 | .00565 .90874 | .00677 .90882 | .00790 .90891 | .00901 .90902 | .01013 .90914 | .01124 .90927 |
| .10 | .00000 .89861 | .00135 .89862 | .00278 .89865 | .00416 .89870 | .00555 .89877 | .00693 .89885 | .00831 .89896 | .00968 .89906 | .01105 .89923 | .01241 .89939 | .01377 .89957 |

$U/K + IV/K'$
 -1
 $U+IV = SN \quad (A+18)$

K=SIN 30

| | I/8 | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A=1.00 |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .01 | .00000 .99073 | .00001 .99073 | .00002 .99073 | .00004 .99073 | .00005 .99073 | .00006 .99073 | .00007 .99073 | .00008 .99073 | .00009 .99073 | .00011 .99073 | .00012 .99073 | .00012 .99073 |
| .02 | .00000 .98146 | .00005 .98146 | .00009 .98146 | .00014 .98146 | .00019 .98146 | .00024 .98146 | .00028 .98146 | .00033 .98146 | .00038 .98146 | .00043 .98146 | .00047 .98146 | .00047 .98146 |
| .03 | .00000 .97220 | .00011 .97220 | .00021 .97220 | .00032 .97220 | .00043 .97220 | .00053 .97220 | .00064 .97220 | .00075 .97221 | .00085 .97221 | .00096 .97221 | .00106 .97222 | .00106 .97222 |
| .04 | .00000 .96295 | .00019 .96295 | .00038 .96295 | .00057 .96295 | .00076 .96295 | .00094 .96295 | .00113 .96297 | .00132 .96298 | .00151 .96299 | .00170 .96300 | .00189 .96301 | .00189 .96301 |
| .05 | .00000 .95373 | .00029 .95373 | .00059 .95373 | .00086 .95374 | .00110 .95374 | .00147 .95375 | .00177 .95377 | .00206 .95378 | .00235 .95380 | .00265 .95382 | .00294 .95384 | .00294 .95384 |
| .06 | .00000 .94452 | .00042 .94452 | .00085 .94453 | .00127 .94454 | .00169 .94455 | .00211 .94457 | .00254 .94459 | .00296 .94462 | .00338 .94465 | .00380 .94468 | .00422 .94472 | .00422 .94472 |
| .07 | .00000 .93534 | .00057 .93535 | .00115 .93535 | .00172 .93537 | .00230 .93539 | .00287 .93542 | .00344 .93545 | .00401 .93547 | .00458 .93554 | .00516 .93559 | .00572 .93565 | .00572 .93565 |
| .08 | .00000 .92620 | .00075 .92620 | .00149 .92620 | .00224 .92622 | .00299 .92624 | .00373 .92627 | .00447 .92631 | .00522 .92636 | .00596 .92642 | .00669 .92649 | .00743 .92665 | .00743 .92665 |
| .09 | .00000 .91709 | .00094 .91709 | .00168 .91711 | .00242 .91715 | .00316 .91719 | .00390 .91725 | .00470 .91732 | .00564 .91740 | .00657 .91750 | .00750 .91761 | .00843 .91773 | .00843 .91773 |
| .10 | .00000 .90802 | .00116 .90803 | .00231 .90805 | .00367 .90810 | .00462 .90816 | .00577 .90824 | .00692 .90833 | .00807 .90845 | .00921 .90856 | .01034 .90868 | .01147 .90869 | .01147 .90869 |

U/K+IV/K'
-1
U+IV=SN (A+IB)

K=SIN 35

| | | A= 0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|-----|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------|
| .01 | • 00000 • 99143 | • 00001 • 99143 | • 00002 • 99143 | • 00003 • 99143 | • 00004 • 99143 | • 00005 • 99143 | • 00006 • 99143 | • 00007 • 99143 | • 00008 • 99143 | • 00009 • 99143 | • 00010 • 99143 | |
| .02 | • 00000 • 98287 | • 00004 • 98287 | • 00008 • 98287 | • 00012 • 98287 | • 00016 • 98287 | • 00020 • 98287 | • 00024 • 98287 | • 00028 • 98287 | • 00032 • 98287 | • 00036 • 98287 | • 00040 • 98287 | |
| .03 | • 00000 • 97431 | • 00009 • 97431 | • 00016 • 97431 | • 00027 • 97431 | • 00036 • 97431 | • 00045 • 97432 | • 00054 • 97432 | • 00063 • 97432 | • 00072 • 97432 | • 00081 • 97433 | • 00090 • 97433 | |
| .04 | • 00000 • 96576 | • 00016 • 96576 | • 00032 • 96576 | • 00046 • 96577 | • 00064 • 96577 | • 00080 • 96577 | • 00096 • 96578 | • 00112 • 96579 | • 00128 • 96580 | • 00144 • 96581 | • 00160 • 96582 | |
| .05 | • 00000 • 95723 | • 00025 • 95723 | • 00050 • 95723 | • 00075 • 95724 | • 00100 • 95725 | • 00125 • 95726 | • 00150 • 95727 | • 00175 • 95728 | • 00200 • 95730 | • 00225 • 95732 | • 00250 • 95734 | |
| .06 | • 00000 • 94871 | • 00036 • 94871 | • 00072 • 94872 | • 00106 • 94873 | • 00144 • 94874 | • 00180 • 94875 | • 00216 • 94876 | • 00252 • 94878 | • 00287 • 94880 | • 00323 • 94883 | • 00359 • 94889 | |
| .07 | • 00000 • 94022 | • 00049 • 94022 | • 00098 • 94023 | • 00147 • 94024 | • 00195 • 94026 | • 00244 • 94029 | • 00293 • 94032 | • 00341 • 94036 | • 00390 • 94040 | • 00436 • 94045 | • 00486 • 94050 | |
| .08 | • 00000 • 93174 | • 00064 • 93175 | • 00127 • 93176 | • 00191 • 93178 | • 00254 • 93181 | • 00318 • 93185 | • 00381 • 93190 | • 00444 • 93195 | • 00507 • 93202 | • 00570 • 93209 | • 00632 • 93217 | |
| .09 | • 00000 • 92330 | • 00080 • 92331 | • 00160 • 92332 | • 00241 • 92335 | • 00321 • 92340 | • 00401 • 92345 | • 00480 • 92352 | • 00560 • 92359 | • 00639 • 92364 | • 00718 • 92379 | • 00796 • 92390 | |
| .10 | • 00000 • 91488 | • 00099 • 91489 | • 00197 • 91492 | • 00296 • 91496 | • 00394 • 91502 | • 00492 • 91509 | • 00590 • 91516 | • 00688 • 91529 | • 00785 • 91541 | • 00882 • 91555 | • 00978 • 91570 | |

$$\begin{aligned} U/K+IV/K' \\ -\frac{1}{i} \\ U+IV=SN \quad (A+iB) \end{aligned}$$

K=SIN 4.0

| | | A= 0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|
| .01 | .00000 .99196 | .00001 .99196 | .00002 .99196 | .00003 .99196 | .00004 .99196 | .00005 .99196 | .00006 .99196 | .00007 .99196 | .00008 .99196 | .00009 .99196 | .000098 .99196 | .000098 .99196 |
| .02 | .00000 .98393 | .00003 .98393 | .00007 .98393 | .00010 .98393 | .00014 .98393 | .00017 .98393 | .00021 .98393 | .00024 .98393 | .00028 .98393 | .00031 .98393 | .00035 .98393 | .00035 .98394 |
| .03 | .00000 .97590 | .00008 .97590 | .00016 .97590 | .00023 .97590 | .00031 .97590 | .00039 .97590 | .00047 .97590 | .00055 .97590 | .00063 .97590 | .00070 .97590 | .00076 .97592 | .00076 .97592 |
| .04 | .00000 .96768 | .00014 .96768 | .00026 .96768 | .00042 .96768 | .00062 .96768 | .00096 .96768 | .00135 .96768 | .00176 .96768 | .00218 .96768 | .00259 .96768 | .00300 .96768 | .00341 .96768 |
| .05 | .00000 .95967 | .00022 .95967 | .00043 .95967 | .00065 .95967 | .00087 .95967 | .00108 .95967 | .00130 .95967 | .00152 .95967 | .00173 .95967 | .00195 .95967 | .00216 .95967 | .00236 .95967 |
| .06 | .00000 .95168 | .00031 .95168 | .00062 .95168 | .00093 .95168 | .00125 .95168 | .00156 .95168 | .00187 .95168 | .00218 .95168 | .00249 .95168 | .00280 .95168 | .00310 .95168 | .00340 .95168 |
| .07 | .00000 .94369 | .00042 .94369 | .00085 .94369 | .00127 .94369 | .00169 .94369 | .00211 .94369 | .00253 .94369 | .00295 .94369 | .00337 .94369 | .00379 .94369 | .00421 .94369 | .00463 .94369 |
| .08 | .00000 .93593 | .00055 .93593 | .00110 .93593 | .00165 .93593 | .00220 .93593 | .00275 .93593 | .00330 .93593 | .00385 .93593 | .00439 .93593 | .00494 .93593 | .00548 .93593 | .00598 .93593 |
| .09 | .00000 .92799 | .00070 .92800 | .00139 .92800 | .00209 .92800 | .00278 .92800 | .00347 .92800 | .00416 .92800 | .00485 .92800 | .00554 .92800 | .00622 .92800 | .00690 .92800 | .00756 .92800 |
| .10 | .00000 .92006 | .00066 .92006 | .00171 .92011 | .00257 .92015 | .00342 .92020 | .00427 .92027 | .00512 .92036 | .00596 .92046 | .00681 .92057 | .00765 .92070 | .00846 .92085 | .00925 .92085 |

$U/K + IV/K$
 -1
 $II+IV=SN \quad (A+IB)$

K=SIN 45

| $1/B$ | $A=0.00$ | $A= .10$ | $A= .20$ | $A= .30$ | $A= .40$ | $A= .50$ | $A= .60$ | $A= .70$ | $A= .80$ | $A= .90$ | $A=1.00$ |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| .01 | .00000 | .00001 | .00002 | .00003 | .00004 | .00005 | .00006 | .00007 | .00008 | .00009 | .00008 |
| | .99237 | .99237 | .99237 | .99237 | .99237 | .99237 | .99237 | .99237 | .99237 | .99237 | .99237 |
| .02 | .00000 | .00003 | .00006 | .00009 | .00012 | .00015 | .00018 | .00021 | .00024 | .00027 | .00030 |
| | .98475 | .98475 | .98475 | .98475 | .98475 | .98475 | .98475 | .98475 | .98475 | .98475 | .98475 |
| .03 | .00000 | .00007 | .00014 | .00021 | .00027 | .00034 | .00041 | .00048 | .00055 | .00062 | .00068 |
| | .97713 | .97713 | .97713 | .97713 | .97713 | .97713 | .97713 | .97713 | .97714 | .97714 | .97715 |
| 57 | .00000 | .00012 | .00024 | .00037 | .00049 | .00061 | .00073 | .00085 | .00097 | .00109 | .00122 |
| | .96951 | .96951 | .96952 | .96952 | .96952 | .96953 | .96953 | .96954 | .96955 | .96955 | .96956 |
| .05 | .00000 | .00019 | .00038 | .00057 | .00076 | .00095 | .00114 | .00133 | .00152 | .00171 | .00190 |
| | .96191 | .96191 | .96191 | .96192 | .96192 | .96193 | .96193 | .96196 | .96197 | .96199 | .96200 |
| .06 | .00000 | .00027 | .00055 | .00082 | .00109 | .00136 | .00164 | .00191 | .00218 | .00245 | .00272 |
| | .95432 | .95432 | .95432 | .95433 | .95434 | .95436 | .95438 | .95440 | .95442 | .95445 | .95446 |
| .07 | .00000 | .00037 | .00074 | .00111 | .00148 | .0018 | .00222 | .00259 | .00296 | .00333 | .00369 |
| | .94674 | .94674 | .94675 | .94676 | .94676 | .94680 | .94683 | .94686 | .94691 | .94695 | .94699 |
| .08 | .00000 | .00048 | .00097 | .00145 | .00193 | .00241 | .00289 | .00337 | .00385 | .00433 | .00481 |
| | .93917 | .93917 | .93918 | .93921 | .93923 | .93927 | .93931 | .93936 | .93942 | .93948 | .93955 |
| .09 | .00000 | .00061 | .00122 | .00183 | .00244 | .00305 | .00365 | .00426 | .00486 | .00546 | .00606 |
| | .93163 | .93163 | .93165 | .93168 | .93171 | .93176 | .93182 | .93189 | .93197 | .93206 | .93217 |
| .10 | .00000 | .00075 | .00150 | .00225 | .00300 | .00375 | .00449 | .00524 | .00598 | .00671 | .00744 |
| | .92410 | .92410 | .92413 | .92417 | .92422 | .92429 | .92437 | .92446 | .92457 | .92470 | .92484 |

$U/K + IV/K'$
 $U+IV=SN$ (A+IB)

| | | K=SIN 50 | | | | A= .90 | | | | A= 1.00 | |
|-----|---------|----------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| | | A= .10 | | A= .20 | | A= .40 | | A= .60 | | A= .80 | |
| | | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
| 1/8 | A= 0.00 | .00000 | .00001 | .00002 | .00003 | .00003 | .00004 | .00005 | .00005 | .00006 | .00007 |
| | .99269 | .99269 | .99269 | .99269 | .99269 | .99269 | .99269 | .99269 | .99269 | .99269 | .99269 |
| .01 | .00000 | .00001 | .00002 | .00003 | .00003 | .00004 | .00005 | .00005 | .00005 | .00006 | .00007 |
| | .99269 | .99269 | .99269 | .99269 | .99269 | .99269 | .99269 | .99269 | .99269 | .99269 | .99269 |
| .02 | .00000 | .00003 | .00005 | .00008 | .00011 | .00013 | .00016 | .00019 | .00022 | .00024 | .00027 |
| | .98539 | .98539 | .98539 | .98539 | .98539 | .98539 | .98539 | .98539 | .98539 | .98540 | .98540 |
| .03 | .00000 | .00006 | .00012 | .00018 | .00024 | .00030 | .00036 | .00042 | .00046 | .00055 | .00061 |
| | .97809 | .97809 | .97809 | .97809 | .97809 | .97810 | .97810 | .97810 | .97810 | .97811 | .97811 |
| .04 | .00000 | .00011 | .00022 | .00032 | .00043 | .00054 | .00065 | .00075 | .00086 | .00097 | .00108 |
| | .97080 | .97080 | .97080 | .97080 | .97090 | .97090 | .97091 | .97091 | .97093 | .97093 | .97094 |
| .05 | .00000 | .00017 | .00034 | .00050 | .00067 | .00084 | .00101 | .00117 | .00134 | .00151 | .00168 |
| | .96351 | .96351 | .96351 | .96352 | .96353 | .96353 | .96354 | .96354 | .96357 | .96358 | .96360 |
| .06 | .00000 | .00024 | .00048 | .00072 | .00097 | .00121 | .00145 | .00169 | .00193 | .00217 | .00241 |
| | .95624 | .95624 | .95624 | .95625 | .95626 | .95627 | .95629 | .95631 | .95633 | .95636 | .95639 |
| .07 | .00000 | .00033 | .00066 | .00098 | .00131 | .00161 | .00197 | .00229 | .00262 | .00294 | .00327 |
| | .94897 | .94897 | .94897 | .94898 | .94899 | .94901 | .94903 | .94905 | .94909 | .94913 | .94917 |
| .08 | .00000 | .00043 | .00086 | .00120 | .00171 | .0214 | .00256 | .00299 | .00341 | .00383 | .00425 |
| | .94172 | .94172 | .94173 | .94175 | .94178 | .94181 | .94185 | .94190 | .94195 | .94202 | .94209 |
| .09 | .00000 | .00054 | .00108 | .00162 | .00218 | .00270 | .00323 | .00377 | .00430 | .00483 | .00536 |
| | .93449 | .93449 | .93451 | .93453 | .93457 | .93461 | .93467 | .93474 | .93482 | .93490 | .93500 |
| .10 | .00000 | .00067 | .00133 | .00199 | .00266 | .00332 | .00398 | .00464 | .00529 | .00594 | .00659 |
| | .92727 | .92727 | .92730 | .92733 | .92738 | .92744 | .92752 | .92761 | .92772 | .92784 | .92787 |

$U/K+IV/K'$
 -1
 $U+IV=SN$
 $(A+IB)$

K=SIN 55

| I/B | A= 0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .01 | .00000 .99295 | .00001 .99295 | .00002 .99295 | .00003 .99295 | .00004 .99295 | .00005 .99295 | .00006 .99295 | .00007 .99295 | .00008 .99295 | .00009 .99295 | .00006 .99295 |
| .02 | .00000 .98590 | .00002 .98590 | .00005 .98590 | .00007 .98590 | .00010 .98590 | .00012 .98590 | .00014 .98590 | .00017 .98590 | .00019 .98590 | .00022 .98590 | .00024 .98590 |
| .03 | .00000 .97885 | .00005 .97885 | .00011 .97885 | .00016 .97885 | .00022 .97885 | .00027 .97885 | .00032 .97885 | .00036 .97885 | .00043 .97885 | .00049 .97885 | .00054 .97885 |
| .04 | .00000 .97181 | .00010 .97181 | .00019 .97181 | .00029 .97182 | .00038 .97182 | .00043 .97182 | .00048 .97182 | .00057 .97183 | .00067 .97183 | .00077 .97184 | .00086 .97185 |
| .05 | .00000 .96478 | .00015 .96478 | .00030 .96478 | .00045 .96479 | .00060 .96479 | .00075 .96479 | .00090 .96480 | .00105 .96481 | .00119 .96482 | .00134 .96484 | .00149 .96487 |
| .06 | .00000 .95775 | .00022 .95776 | .00043 .95776 | .00064 .95776 | .00086 .95776 | .00107 .95776 | .00129 .95776 | .00150 .95776 | .00172 .95776 | .00193 .95776 | .00214 .95776 |
| .07 | .00000 .95074 | .00029 .95075 | .00058 .95075 | .00088 .95075 | .00117 .95076 | .00146 .95076 | .00175 .95076 | .00204 .95076 | .00233 .95076 | .00262 .95076 | .00291 .95076 |
| .08 | .00000 .94374 | .00033 .94374 | .00076 .94375 | .00114 .94375 | .00152 .94375 | .00190 .94375 | .00220 .94375 | .00266 .94375 | .00304 .94375 | .00341 .94375 | .00379 .94375 |
| .09 | .00000 .93675 | .00048 .93675 | .00096 .93675 | .00144 .93675 | .00192 .93675 | .00240 .93675 | .00280 .93675 | .00335 .93675 | .00383 .93675 | .00430 .93675 | .00477 .93675 |
| .10 | .00000 .92978 | .00055 .92978 | .00118 .92978 | .00178 .92984 | .00237 .92984 | .00296 .92984 | .00354 .92984 | .00413 .92984 | .00471 .93021 | .00529 .93021 | .00587 .93046 |

$U/K+IV/K'$
 \sim_1
 $U+IV=SN \quad (A+iB)$

$K=\sin 6.0$

| 1/B | A= 0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|-----|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| | | | | | | | | | | | |
| .01 | .00000 | .00001 | .00002 | .00003 | .00004 | .00005 | .00006 | .00007 | .00008 | .00009 | .000005 |
| | .99315 | .99315 | .99315 | .99315 | .99315 | .99315 | .99315 | .99315 | .99315 | .99315 | .99315 |
| .02 | .00000 | .00002 | .00004 | .00006 | .00009 | .00011 | .00013 | .00015 | .00017 | .00019 | .00021 |
| | .98630 | .98630 | .98630 | .98630 | .98630 | .98630 | .98630 | .98630 | .98631 | .98631 | .98631 |
| .03 | .00000 | .00005 | .00010 | .00014 | .00019 | .00024 | .00029 | .00034 | .00038 | .00043 | .00046 |
| | .97946 | .97946 | .97946 | .97946 | .97946 | .97946 | .97946 | .97946 | .97947 | .97947 | .97948 |
| .04 | .00000 | .00009 | .00017 | .00026 | .00034 | .00043 | .00051 | .00060 | .00068 | .00077 | .00085 |
| | .97262 | .97262 | .97262 | .97262 | .97262 | .97263 | .97263 | .97264 | .97265 | .97265 | .97266 |
| .05 | .00000 | .00013 | .00027 | .00040 | .00053 | .00067 | .00080 | .00093 | .00107 | .00120 | .00133 |
| | .96578 | .96579 | .96579 | .96579 | .96580 | .96581 | .96581 | .96583 | .96584 | .96585 | .96587 |
| .06 | .00000 | .00019 | .00038 | .00058 | .00077 | .00096 | .00115 | .00134 | .00153 | .00172 | .00191 |
| | .95896 | .95896 | .95896 | .95897 | .95898 | .95900 | .95901 | .95903 | .95905 | .95908 | .95910 |
| .07 | .00000 | .00026 | .00052 | .00076 | .00104 | .00130 | .00156 | .00182 | .00208 | .00234 | .00260 |
| | .95214 | .95214 | .95215 | .95216 | .95218 | .95220 | .95223 | .95225 | .95229 | .95233 | .95237 |
| .08 | .00000 | .00034 | .00068 | .00102 | .00136 | .00170 | .00204 | .00237 | .00271 | .00305 | .00338 |
| | .94534 | .94534 | .94535 | .94537 | .94539 | .94542 | .94546 | .94551 | .94556 | .94562 | .94568 |
| .09 | .00000 | .00043 | .00086 | .00123 | .00172 | .00214 | .00257 | .00300 | .00342 | .00384 | .00425 |
| | .93855 | .93855 | .93856 | .93859 | .93862 | .93867 | .93872 | .93878 | .93886 | .93894 | .93903 |
| .10 | .00000 | .00053 | .00106 | .00159 | .00211 | .00264 | .00316 | .00369 | .00421 | .00473 | .00524 |
| | .93177 | .93177 | .93183 | .93187 | .93197 | .93193 | .93201 | .93209 | .93219 | .93230 | .93243 |

$U/K + IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 65

| | | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A=1.00 |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| .01 | .00000 | .00000 | .00001 | .00001 | .00002 | .00002 | .00003 | .00003 | .00004 | .00004 | .00005 | |
| | .99331 | .99331 | .99331 | .99331 | .99331 | .99331 | .99331 | .99331 | .99331 | .99331 | .99331 | |
| .02 | .00000 | .00002 | .00004 | .00006 | .00008 | .00010 | .00011 | .00013 | .00015 | .00017 | .00019 | |
| | .98662 | .98662 | .98662 | .98662 | .98662 | .98662 | .98662 | .98662 | .98662 | .98662 | .98662 | |
| .03 | .00006 | .00004 | .00009 | .00013 | .00017 | .00021 | .00026 | .00030 | .00034 | .00039 | .00043 | |
| | .97993 | .97993 | .97993 | .97993 | .97993 | .97994 | .97994 | .97994 | .97994 | .97995 | .97995 | |
| 6 | .04 | .00008 | .00015 | .00023 | .00031 | .00034 | .00046 | .00053 | .00061 | .00069 | .00076 | |
| | .97325 | .97325 | .97325 | .97326 | .97326 | .97326 | .97327 | .97327 | .97328 | .97329 | .97329 | |
| .05 | .00000 | .00000 | .00024 | .00036 | .00048 | .00069 | .00071 | .00083 | .00095 | .00107 | .00119 | |
| | .96657 | .96658 | .96658 | .96658 | .96659 | .96660 | .96660 | .96662 | .96663 | .96664 | .96666 | |
| .15 | .00000 | .00017 | .00034 | .00051 | .00069 | .00085 | .00103 | .00120 | .00137 | .00154 | .00171 | |
| | .95991 | .95991 | .95991 | .95992 | .95992 | .95994 | .95994 | .95996 | .95996 | .96000 | .96005 | |
| .07 | .00000 | .00023 | .00047 | .00070 | .00093 | .00116 | .00140 | .00163 | .00186 | .00205 | .00232 | |
| | .95325 | .95325 | .95326 | .95327 | .95328 | .95328 | .95329 | .95333 | .95339 | .95343 | .95347 | |
| .08 | .00000 | .00030 | .00061 | .00091 | .00121 | .00152 | .00182 | .00212 | .00242 | .00272 | .00302 | |
| | .94660 | .94660 | .94661 | .94661 | .94662 | .94663 | .94663 | .94672 | .94676 | .94681 | .94693 | |
| .09 | .00000 | .00036 | .00077 | .00115 | .00153 | .00191 | .00230 | .00268 | .00305 | .00343 | .00381 | |
| | .93996 | .93996 | .93998 | .94000 | .94003 | .94004 | .94013 | .94019 | .94026 | .94034 | .94043 | |
| .10 | .00000 | .00047 | .00094 | .00142 | .00189 | .00231 | .00283 | .00329 | .00376 | .00422 | .00468 | |
| | .93335 | .93334 | .93336 | .93339 | .93344 | .93350 | .93357 | .93365 | .93375 | .93386 | .93398 | |

$$U+IV = S_{MN} - \frac{1}{4}(A+IB)$$

K=STN 70

| $1/B$ | $A = 0.00$ | $A = .10$ | $A = .20$ | $A = .30$ | $A = .40$ | $A = .50$ | $A = .60$ | $A = .70$ | $A = .80$ | $A = .90$ | $A = 1.00$ |
|-------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| .31 | *.00000 .99343 | *.00001 .99343 | *.00002 .99343 | *.00003 .99343 | *.00002 .99343 | *.00003 .99343 | *.00003 .99343 | *.00003 .99343 | *.00004 .99343 | *.00004 .99343 | *.00004 .99343 |
| .02 | *.00000 .98686 | *.00002 .98686 | *.00003 .98686 | *.00005 .98686 | *.00007 .98686 | *.00008 .98687 | *.00010 .98687 | *.00012 .98687 | *.00014 .98687 | *.00015 .98687 | *.00017 .98687 |
| .03 | *.00000 .98030 | *.00004 .98030 | *.00008 .98030 | *.00014 .98030 | *.00015 .98030 | *.00019 .98030 | *.00023 .98031 | *.00027 .98031 | *.00031 .98031 | *.00034 .98031 | *.00036 .98032 |
| .04 | *.00000 .97374 | *.00007 .97374 | *.00014 .97374 | *.00020 .97374 | *.00027 .97375 | *.00034 .97375 | *.00041 .97375 | *.00047 .97376 | *.00054 .97377 | *.00061 .97377 | *.00066 .97378 |
| .05 | *.00000 .96716 | *.00011 .96716 | *.00021 .96719 | *.00032 .96719 | *.00042 .96720 | *.00053 .96721 | *.00064 .96721 | *.00074 .96722 | *.00085 .96722 | *.00095 .96725 | *.00106 .96727 |
| .06 | *.00000 .96064 | *.00015 .96064 | *.00030 .96064 | *.00046 .96065 | *.00061 .96066 | *.00076 .96067 | *.00091 .96069 | *.00106 .96071 | *.00122 .96073 | *.00137 .96075 | *.00152 .96078 |
| .07 | *.00000 .95410 | *.00021 .95410 | *.00041 .95411 | *.00062 .95412 | *.00083 .95413 | *.00103 .95415 | *.00124 .95416 | *.00145 .95421 | *.00165 .95424 | *.00186 .95426 | *.00206 .95432 |
| .08 | *.00000 .94757 | *.00027 .94757 | *.00054 .94758 | *.00081 .94760 | *.00108 .94762 | *.00135 .94757 | *.00162 .94769 | *.00186 .94773 | *.00215 .94778 | *.00242 .94784 | *.00268 .94790 |
| .09 | *.00000 .94105 | *.00034 .94105 | *.00066 .94107 | *.00102 .94109 | *.00136 .94112 | *.00170 .94117 | *.00204 .94122 | *.00238 .94128 | *.00272 .94135 | *.00305 .94143 | *.00339 .94152 |
| .10 | *.00000 .93455 | *.00042 .93457 | *.00084 .93460 | *.00126 .93461 | *.00168 .93465 | *.00210 .93467 | *.00251 .93473 | *.00293 .93477 | *.00334 .93495 | *.00375 .93506 | *.00416 .93518 |

$U/K + IV/K'$
 \sim_1
 $U+IV=SN \quad (A+IB)$

K=SIN 75

| $1/B$ | $A=0.00$ | $A= .10$ | $A= .20$ | $A= .30$ | $A= .40$ | $A= .50$ | $A= .60$ | $A= .70$ | $A= .80$ | $A= .90$ | $A= 1.00$ |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| .01 | .00000 | .00000 | .00001 | .00001 | .00001 | .00001 | .00002 | .00003 | .00003 | .00003 | .00004 |
| | .99352 | .99352 | .99352 | .99352 | .99352 | .99352 | .99352 | .99352 | .99352 | .99352 | .99352 |
| .02 | .00000 | .00001 | .00003 | .00004 | .00006 | .00007 | .00009 | .00010 | .00012 | .00015 | .00015 |
| | .96705 | .96705 | .96705 | .96705 | .96705 | .96705 | .96705 | .96705 | .96705 | .96705 | .96705 |
| .03 | .00000 | .00003 | .00007 | .00010 | .00013 | .00017 | .00020 | .00024 | .00027 | .00030 | .00034 |
| | .98057 | .98057 | .98057 | .98057 | .98057 | .98057 | .98058 | .98058 | .98058 | .98059 | .98059 |
| .04 | .00000 | .00006 | .00012 | .00018 | .00024 | .00030 | .00036 | .00042 | .00048 | .00054 | .00060 |
| | .97410 | .97410 | .97410 | .97411 | .97411 | .97412 | .97412 | .97412 | .97413 | .97414 | .97414 |
| .05 | .00000 | .00009 | .00019 | .00028 | .00037 | .00047 | .00056 | .00065 | .00074 | .00084 | .00093 |
| | .95762 | .95762 | .95764 | .95764 | .95765 | .95765 | .95766 | .95767 | .95768 | .95769 | .95772 |
| .06 | .00000 | .00013 | .00027 | .00040 | .00054 | .00067 | .00080 | .00094 | .00107 | .00120 | .00134 |
| | .96118 | .96118 | .96119 | .96119 | .96120 | .96121 | .96123 | .96125 | .96127 | .96129 | .96132 |
| .07 | .00000 | .00013 | .00036 | .00055 | .00073 | .00091 | .00109 | .00127 | .00145 | .00163 | .00181 |
| | .95473 | .95473 | .95474 | .95475 | .95477 | .95479 | .95481 | .95484 | .95487 | .95491 | .95495 |
| .08 | .00000 | .00024 | .00048 | .00071 | .00095 | .00119 | .00142 | .00166 | .00189 | .00213 | .00236 |
| | .94829 | .94829 | .94830 | .94832 | .94834 | .94837 | .94841 | .94845 | .94850 | .94855 | .94856 |
| .09 | .00000 | .00030 | .00060 | .00090 | .00120 | .00150 | .00180 | .00210 | .00239 | .00269 | .00298 |
| | .94186 | .94186 | .94186 | .94190 | .94193 | .94193 | .94203 | .94209 | .94216 | .94223 | .94232 |
| .10 | .00000 | .00037 | .00074 | .00111 | .00148 | .00185 | .00221 | .00258 | .00294 | .00331 | .00367 |
| | .93544 | .93544 | .93547 | .93550 | .93554 | .93560 | .93567 | .93575 | .93585 | .93595 | .93607 |

$U/K+iV/K'$
 -1
 $U+iV=SN(A+iB)$

K=SIN 80

| | A=0.0 | A=.10 | A=.20 | A=.30 | A=.40 | A=.50 | A=.60 | A=.70 | A=.80 | A=.90 | A=1.00 |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .01 | .00100 .99359 | .00000 .99359 | .00001 .99359 | .00001 .99359 | .00002 .99359 | .00002 .99359 | .00002 .99359 | .00003 .99359 | .00003 .99359 | .00003 .99359 | .00003 .99359 |
| .02 | .00001 .98717 | .00001 .98717 | .00003 .98717 | .00004 .98717 | .00005 .98717 | .00006 .98717 | .00006 .98717 | .00009 .98717 | .00010 .98717 | .00012 .98718 | .00013 .98718 |
| .03 | .00000 .98076 | .00000 .98076 | .00003 .98076 | .00006 .98076 | .00009 .98076 | .00012 .98076 | .00014 .98076 | .00017 .98077 | .00020 .98077 | .00026 .98077 | .00029 .98078 |
| .04 | .00000 .97435 | .00005 .97435 | .00010 .97435 | .00015 .97436 | .00021 .97436 | .00026 .97436 | .00031 .97437 | .00036 .97437 | .00041 .97438 | .00046 .97439 | .00051 .97439 |
| .05 | .00000 .96795 | .00008 .96795 | .00016 .96795 | .00024 .96796 | .00032 .96796 | .00040 .96797 | .00048 .96797 | .00056 .96798 | .00064 .96799 | .00072 .96800 | .00080 .96803 |
| .06 | .00000 .96156 | .00012 .96156 | .00023 .96156 | .00035 .96157 | .00046 .96157 | .00058 .96157 | .00069 .96157 | .00081 .96161 | .00092 .96162 | .00104 .96167 | .00115 .96169 |
| .07 | .00000 .95517 | .00016 .95517 | .00031 .95518 | .00047 .95519 | .00053 .95520 | .00067 .95522 | .00073 .95525 | .00084 .95527 | .00116 .95531 | .00141 .95534 | .00156 .95536 |
| .08 | .00000 .94879 | .00020 .94879 | .00042 .94880 | .00061 .94882 | .00082 .94884 | .00102 .94887 | .00123 .94891 | .00143 .94895 | .00163 .94900 | .00183 .94905 | .00203 .94911 |
| .09 | .00000 .94242 | .00026 .94243 | .00052 .94244 | .00078 .94246 | .00103 .94249 | .00129 .94254 | .00155 .94259 | .00160 .94265 | .00206 .94271 | .00231 .94279 | .00257 .94288 |
| .10 | .00000 .93606 | .00032 .93607 | .00064 .93609 | .00096 .93612 | .00127 .93616 | .00159 .93622 | .00191 .93629 | .00222 .93637 | .00253 .93646 | .00285 .93657 | .00316 .93659 |

U/K+IV/K'
-
J+IV=SN ₋₁ (A+18)

K=SIN 85

| | | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | $\beta = .60$ | $\beta = .70$ | $\beta = .80$ | A= .90 | A= 1.00 |
|-----|--------|---------|---------|---------|---------|---------|---------|---------------|---------------|---------------|---------|---------|
| .01 | .00000 | *.99362 | *.99362 | *.99362 | *.99362 | *.99362 | *.99362 | *.99362 | *.99362 | *.99362 | *.99362 | *.99362 |
| .02 | .00000 | *.98725 | *.98725 | *.98725 | *.98725 | *.98725 | *.98725 | *.98725 | *.98725 | *.98725 | *.98725 | *.98725 |
| .03 | .00000 | *.98087 | *.98087 | *.98087 | *.98087 | *.98087 | *.98087 | *.98087 | *.98087 | *.98087 | *.98087 | *.98087 |
| .04 | .00000 | *.97450 | *.97450 | *.97450 | *.97450 | *.97450 | *.97450 | *.97451 | *.97451 | *.97452 | *.97453 | *.97454 |
| .05 | .00000 | *.96813 | *.96814 | *.96814 | *.96814 | *.96814 | *.96815 | *.96815 | *.96815 | *.96817 | *.96820 | *.96821 |
| .06 | .00009 | *.96178 | *.96178 | *.96178 | *.96179 | *.96179 | *.96180 | *.96181 | *.96181 | *.96184 | *.96186 | *.96189 |
| .07 | .00000 | *.95542 | *.95543 | *.95543 | *.95543 | *.95543 | *.95546 | *.95546 | *.95546 | *.95550 | *.95553 | *.95556 |
| .08 | .00000 | *.94908 | *.94909 | *.94909 | *.94911 | *.94911 | *.94913 | *.94913 | *.94913 | *.94920 | *.94924 | *.94934 |
| .09 | .00000 | *.94275 | *.94277 | *.94277 | *.94279 | *.94279 | *.94282 | *.94282 | *.94285 | *.94291 | *.94297 | *.94304 |
| .10 | .00000 | *.93643 | *.93645 | *.93645 | *.93646 | *.93646 | *.93653 | *.93653 | *.93656 | *.93665 | *.93673 | *.93693 |

$U/K+IV/K'$
 -1
 $U+IV=SN$ (A+IB)

K=SIN 86

| | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A=1.00 |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| .01 | *.00000 | *.99363 | *.99363 | *.99363 | *.99363 | *.99363 | *.99363 | *.99363 | *.99363 | *.99363 | *.99363 |
| .02 | *.00000 | *.98725 | *.98725 | *.98725 | *.98725 | *.98726 | *.98726 | *.98726 | *.98726 | *.98726 | *.98726 |
| .03 | *.00000 | *.98088 | *.98088 | *.98088 | *.98089 | *.98089 | *.98089 | *.98089 | *.98089 | *.98089 | *.98089 |
| .04 | *.00000 | *.97452 | *.97452 | *.97452 | *.97452 | *.97453 | *.97453 | *.97454 | *.97454 | *.97454 | *.97454 |
| .05 | *.00000 | *.96816 | *.96816 | *.96816 | *.96816 | *.96817 | *.96817 | *.96818 | *.96818 | *.96818 | *.96818 |
| .06 | *.00000 | *.96180 | *.96180 | *.96181 | *.96181 | *.96182 | *.96182 | *.96184 | *.96185 | *.96187 | *.96189 |
| .07 | *.00000 | *.95546 | *.95546 | *.95546 | *.95546 | *.95547 | *.95547 | *.95550 | *.95553 | *.95556 | *.95559 |
| .08 | *.00000 | *.94912 | *.94912 | *.94913 | *.94913 | *.94915 | *.94917 | *.94920 | *.94923 | *.94927 | *.94932 |
| .09 | *.00000 | *.94279 | *.94279 | *.94281 | *.94281 | *.94286 | *.94286 | *.94290 | *.94295 | *.94301 | *.94308 |
| .10 | *.00000 | *.93547 | *.93547 | *.93646 | *.93646 | *.93650 | *.93653 | *.93657 | *.93663 | *.93667 | *.93670 |

$$\begin{aligned} U/K + IV/K' \\ -1 \\ U+IV = SK \quad (A+IB) \end{aligned}$$

K=SIN 87

| $\frac{1}{B}$ | $A=0.00$ | $A=+10$ | $A=+20$ | $A=+30$ | $A=+40$ | $A=+50$ | $A=+60$ | $A=+70$ | $A=+80$ | $A=+90$ | $A=+100$ |
|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| .01 | *000000 *99363 | *000000 *99363 | *000000 *99363 | *000001 *99363 | *000001 *99363 | *000001 *99363 | *000002 *99363 | *000002 *99363 | *000002 *99363 | *000002 *99363 | *000002 *99363 |
| .02 | *000000 *98726 | *000001 *98726 | *000002 *98726 | *000003 *98726 | *000004 *98726 | *000005 *98726 | *000006 *98726 | *000036 *98726 | *000007 *98726 | *000008 *98726 | *000009 *98727 |
| .03 | *000000 *98089 | *000002 *98089 | *000004 *98089 | *000005 *98089 | *000006 *98089 | *000008 *98089 | *000010 *98089 | *000115 *98090 | *000117 *98091 | *000119 *98091 | *00021 *98091 |
| .04 | *000000 *97453 | *000004 *97453 | *000007 *97453 | *000111 *97454 | *000115 *97454 | *000118 *97454 | *000122 *97455 | *000226 *97455 | *000229 *97456 | *00033 *97456 | *00037 *97457 |
| .05 | *000000 *96817 | *000006 *96817 | *000112 *96818 | *000117 *96818 | *00023 *96818 | *00023 *96819 | *00025 *96819 | *00035 *96820 | *00046 *96821 | *00052 *96822 | *00057 *96825 |
| .06 | *000000 *96182 | *000008 *96182 | *000117 *96183 | *000225 *96183 | *00033 *96184 | *00041 *96184 | *00050 *96186 | *00058 *96187 | *00066 *96189 | *00074 *96191 | *00082 *96193 |
| .07 | *000000 *95548 | *000011 *95548 | *000123 *95549 | *00034 *95550 | *00045 *95551 | *00056 *95553 | *00067 *95556 | *00079 *95558 | *00090 *95562 | *00101 *95565 | *00112 *95569 |
| .08 | *000000 *94914 | *000015 *94914 | *000115 *94915 | *00029 *94916 | *00044 *94917 | *00159 *94920 | *00073 *94922 | *00088 *94926 | *00102 *94930 | *00117 *94935 | *00131 *94940 |
| .09 | *000000 *94282 | *000019 *94282 | *00027 *94284 | *00056 *94286 | *00074 *94289 | *00093 *94293 | *00111 *94298 | *0126 *94304 | *0148 *94311 | *0166 *94319 | *0184 *94327 |
| .10 | *000000 *93651 | *000023 *93651 | *00046 *93653 | *00068 *93655 | *00091 *93661 | *00114 *93666 | *00137 *93673 | *00159 *93681 | *00182 *93690 | *00204 *93701 | *00226 *93712 |

$U/K+IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 86

| | | A= 0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|-----|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| .01 | .00000 | .99363 | .99363 | .99363 | .99363 | .99363 | .99363 | .99363 | .99363 | .99363 | .99363 | .99363 |
| .02 | .00000 | .98727 | .98727 | .98727 | .98727 | .98727 | .98727 | .98727 | .98727 | .98727 | .98727 | .98727 |
| .03 | .00000 | .98090 | .98090 | .98090 | .98090 | .98090 | .98090 | .98090 | .98090 | .98090 | .98090 | .98090 |
| .04 | .00000 | .97454 | .97454 | .97454 | .97454 | .97454 | .97454 | .97454 | .97454 | .97454 | .97454 | .97454 |
| .05 | .00000 | .96819 | .96819 | .96819 | .96819 | .96819 | .96819 | .96819 | .96819 | .96819 | .96819 | .96819 |
| .06 | .00000 | .96184 | .96184 | .96184 | .96184 | .96184 | .96184 | .96184 | .96184 | .96184 | .96184 | .96184 |
| .07 | .00000 | .95550 | .95550 | .95550 | .95550 | .95550 | .95550 | .95550 | .95550 | .95550 | .95550 | .95550 |
| .08 | .00000 | .94916 | .94916 | .94917 | .94917 | .94917 | .94917 | .94921 | .94921 | .94921 | .94921 | .94921 |
| .09 | .00000 | .94284 | .94285 | .94286 | .94286 | .94286 | .94286 | .94295 | .94295 | .94300 | .94300 | .94300 |
| .10 | .00000 | .93653 | .93654 | .93655 | .93655 | .93655 | .93655 | .93663 | .93663 | .93663 | .93663 | .93663 |

$U/K + IV/K'$
 -1
 $U+IV=SN$ (A+B)

K=SIN 69

| | | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|-----|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| .01 | .00006 | *.00009 | *.99363 | *.99363 | *.99363 | *.99363 | *.99363 | *.99363 | *.99363 | *.99363 | *.99363 | *.99363 |
| .02 | .00000 | *.00001 | *.00001 | *.00002 | *.00003 | *.00004 | *.00004 | *.00005 | *.00005 | *.00006 | *.00007 | *.00007 |
| .03 | .00000 | *.00002 | *.98991 | *.98091 | *.98091 | *.98091 | *.98091 | *.98091 | *.98091 | *.98092 | *.98092 | *.98092 |
| .04 | .00000 | *.00003 | *.97455 | *.97455 | *.97455 | *.97455 | *.97456 | *.97456 | *.97457 | *.97458 | *.97459 | *.97459 |
| .05 | .00000 | *.00005 | *.96819 | *.96820 | *.96820 | *.96821 | *.96821 | *.96822 | *.96823 | *.96824 | *.96826 | *.96827 |
| .06 | .00000 | *.00007 | *.96185 | *.96105 | *.96105 | *.96186 | *.96187 | *.96187 | *.96189 | *.96191 | *.96193 | *.96193 |
| .07 | .00000 | *.00009 | *.95551 | *.95551 | *.95551 | *.95553 | *.95554 | *.95556 | *.95558 | *.95561 | *.95564 | *.95572 |
| .08 | .00000 | *.00012 | *.94917 | *.94918 | *.94918 | *.94919 | *.94920 | *.94920 | *.94920 | *.94929 | *.94933 | *.94936 |
| .09 | .00000 | *.00015 | *.94285 | *.94286 | *.94286 | *.94287 | *.94289 | *.94293 | *.94297 | *.94302 | *.94308 | *.94314 |
| .10 | .00000 | *.00018 | *.93654 | *.93655 | *.93657 | *.93660 | *.93664 | *.93670 | *.93677 | *.93685 | *.93694 | *.93705 |

$U/K+IV/K'$
 -1
 $U+IV=SN \quad (A+(B))$

K=SIN S

| A/B | $A=0.00$ | $A=0.10$ | $A=0.20$ | $A=0.30$ | $A=0.40$ | $A=0.50$ | $A=0.60$ | $A=0.70$ | $A=0.80$ | $A=0.90$ | $A=1.00$ |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| .10 | .00000 | .00477 | .00953 | .01429 | .01905 | .02380 | .02855 | .03328 | .03801 | .04273 | .04743 |
| | .74414 | .74415 | .74419 | .74426 | .74436 | .74443 | .74464 | .74482 | .74503 | .74526 | .74552 |
| .20 | .00000 | .01142 | .02284 | .03423 | .04560 | .05603 | .06621 | .07944 | .09061 | .10170 | .11272 |
| | .59268 | .59268 | .59299 | .59325 | .59362 | .59409 | .59466 | .59533 | .59611 | .59698 | .59795 |
| .30 | .00300 | .01753 | .03503 | .05248 | .06985 | .08712 | .10425 | .12123 | .13804 | .15465 | .17104 |
| | .49615 | .49625 | .49658 | .49711 | .49786 | .49881 | .49997 | .50133 | .50289 | .50464 | .50657 |
| .40 | .00000 | .02305 | .04605 | .06894 | .09168 | .11422 | .13650 | .15850 | .18015 | .20142 | .22228 |
| | .42742 | .42759 | .42810 | .42896 | .43015 | .43167 | .43351 | .43566 | .43811 | .44085 | .44387 |
| .50 | .00000 | .02798 | .05588 | .08362 | .11113 | .13832 | .16513 | .19147 | .21729 | .24252 | .26711 |
| | .37557 | .37557 | .37623 | .37741 | .37906 | .38116 | .38371 | .38668 | .39005 | .39382 | .39794 |
| .60 | .00000 | .03233 | .06456 | .09659 | .12829 | .15958 | .19035 | .22050 | .24993 | .27853 | .30630 |
| | .33406 | .33438 | .33526 | .33678 | .33887 | .34153 | .34475 | .34851 | .35278 | .35754 | .36274 |
| .70 | .00000 | .03614 | .07216 | .10793 | .14333 | .17823 | .21249 | .24600 | .27900 | .31019 | .34065 |
| | .30063 | .30099 | .30206 | .30304 | .30632 | .30948 | .31332 | .31781 | .32292 | .32861 | .33484 |
| .80 | .00005 | .03944 | .07875 | .11779 | .15644 | .19453 | .23190 | .26840 | .30384 | .33807 | .37092 |
| | .27293 | .27333 | .27454 | .27655 | .27937 | .28297 | .28736 | .29251 | .29639 | .30494 | .31213 |
| .90 | .00000 | .04229 | .08445 | .12635 | .16784 | .20875 | .24892 | .28811 | .32612 | .36273 | .39774 |
| | .24962 | .25006 | .25138 | .25358 | .25667 | .26065 | .26551 | .27124 | .27781 | .28516 | .29324 |
| 1.00 | .00000 | .04474 | .08937 | .13376 | .17776 | .22119 | .26386 | .30551 | .34588 | .38468 | .42165 |
| | .22976 | .23022 | .23163 | .23398 | .23729 | .24157 | .24683 | .25307 | .26025 | .26834 | .27725 |

$U/K+IV/K'$
 π_1
 $U+IV=SN \quad (A+IB)$

K=SIN 10

| | | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| .10 | .00000 | .00314 | .00627 | .00941 | .01253 | .01566 | .01877 | .02188 | .02498 | .02807 | .03114 | |
| | .82649 | .82650 | .82654 | .82661 | .82671 | .82683 | .82696 | .82716 | .82736 | .82759 | .82765 | |
| .20 | .00000 | .00935 | .01070 | .02802 | .03731 | .04656 | .05576 | .06490 | .07397 | .08296 | .09186 | |
| | .68954 | .68961 | .68980 | .69013 | .69058 | .69117 | .69168 | .69272 | .69368 | .69476 | .69596 | |
| .30 | .00000 | .01571 | .03139 | .04701 | .06255 | .07797 | .09326 | .10839 | .12332 | .13805 | .15254 | |
| | .58799 | .58813 | .58854 | .58923 | .59019 | .59142 | .59291 | .59466 | .59657 | .59892 | .60140 | |
| .40 | .00000 | .02151 | .04297 | .06433 | .08552 | .10651 | .12723 | .14765 | .16772 | .18739 | .20664 | |
| | .51106 | .51128 | .51194 | .52303 | .51456 | .51651 | .51838 | .52165 | .52460 | .52833 | .53222 | |
| .50 | .00000 | .02668 | .05327 | .07970 | .10590 | .13177 | .15724 | .18225 | .20672 | .23059 | .25379 | |
| | .45090 | .45121 | .45212 | .45363 | .45573 | .45841 | .46166 | .46546 | .46978 | .47459 | .47588 | |
| .60 | .00000 | .03121 | .06231 | .09319 | .12376 | .15391 | .18353 | .21252 | .24079 | .26624 | .29679 | |
| | .40250 | .40298 | .40412 | .40602 | .40867 | .41205 | .41614 | .42091 | .42634 | .43240 | .43903 | |
| .70 | .00030 | .03514 | .07016 | .10494 | .13934 | .17323 | .20649 | .23898 | .27056 | .30112 | .33054 | |
| | .36299 | .36344 | .36479 | .36704 | .37017 | .37417 | .37902 | .38470 | .39117 | .39838 | .40628 | |
| .80 | .00000 | .03055 | .07696 | .11512 | .15287 | .19006 | .22654 | .26213 | .29666 | .32997 | .36190 | |
| | .32998 | .33048 | .33201 | .33454 | .33608 | .34262 | .34815 | .35464 | .36205 | .37033 | .37541 | |
| .90 | .00000 | .04148 | .08283 | .12392 | .16460 | .20471 | .24406 | .28244 | .31963 | .35542 | .38960 | |
| | .30208 | .30263 | .30429 | .30706 | .31094 | .31594 | .32204 | .32925 | .33751 | .34676 | .35694 | |
| 1.00 | .00000 | .04400 | .08788 | .13152 | .17478 | .21748 | .25941 | .30032 | .33995 | .37801 | .41423 | |
| | .27324 | .27883 | .28059 | .28353 | .28768 | .29305 | .29965 | .30747 | .31649 | .32664 | .33784 | |

$U/K+IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 15

| 1/B | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|---------|
| | | | | | | | | | | | |
| .10 | .00000 | .00224 | .00449 | .00673 | .00896 | .01120 | .01342 | .01564 | .01785 | .02005 | .02225 |
| | .86390 | .86391 | .86395 | .86401 | .86409 | .86420 | .86433 | .86448 | .86467 | .86487 | .86509 |
| .20 | .00000 | .00720 | .01499 | .02246 | .02990 | .03730 | .04464 | .05192 | .05913 | .06625 | .07328 |
| | .74463 | .74470 | .74491 | .74525 | .74573 | .74634 | .74709 | .74797 | .74898 | .75011 | .75137 |
| .30 | .00000 | .01361 | .02719 | .04070 | .05413 | .06743 | .08059 | .09356 | .10634 | .11888 | .13116 |
| | .64709 | .64725 | .64773 | .64851 | .64962 | .65102 | .65273 | .65473 | .65702 | .65959 | .66243 |
| .40 | .00000 | .01950 | .03895 | .05827 | .07743 | .09637 | .11502 | .13334 | .15129 | .16881 | .18586 |
| | .56056 | .56092 | .56092 | .57092 | .57272 | .57503 | .57783 | .58110 | .58462 | .58899 | .59356 |
| .50 | .00000 | .02484 | .04959 | .07417 | .09849 | .12243 | .14605 | .16912 | .19162 | .21348 | .23464 |
| | .50697 | .50534 | .50612 | .50823 | .51074 | .51394 | .51782 | .52235 | .52752 | .53327 | .53960 |
| .60 | .00000 | .02954 | .05097 | .08019 | .11707 | .14551 | .17340 | .20063 | .22710 | .25272 | .27739 |
| | .45279 | .45325 | .45462 | .45689 | .46005 | .46409 | .46899 | .47471 | .48122 | .48849 | .49645 |
| .70 | .00000 | .03364 | .06714 | .10040 | .13327 | .16561 | .19730 | .22819 | .25815 | .28705 | .31475 |
| | .40942 | .40996 | .41157 | .41425 | .41799 | .42278 | .42859 | .43539 | .44314 | .45180 | .46128 |
| .80 | .00000 | .03717 | .07421 | .11097 | .14732 | .18311 | .21815 | .25229 | .28535 | .31714 | .34752 |
| | .37293 | .37354 | .37535 | .37838 | .38261 | .38803 | .39464 | .40240 | .41128 | .42120 | .43209 |
| .90 | .00000 | .04021 | .08029 | .12010 | .15950 | .19831 | .23635 | .27341 | .30525 | .34366 | .37642 |
| | .34191 | .34257 | .34454 | .34784 | .35247 | .35843 | .37572 | .377432 | .38419 | .39527 | .40746 |
| 1.00 | .00000 | .04282 | .08552 | .12797 | .17005 | .21155 | .25227 | .29197 | .33036 | .36715 | .40207 |
| | .31527 | .31597 | .31806 | .32157 | .32651 | .33291 | .34077 | .35009 | .36086 | .37299 | .38636 |

$U/K + IV/K'$
 -1
 $U+IV=SN \quad (A+iB)$

K=SIN 20

| | | A= .00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| .10 | .00000 | .00172 | .00245 | .00517 | .00688 | .00860 | .01031 | .01201 | .01371 | .01540 | .01708 | |
| | .88505 | .88506 | .88509 | .88515 | .88522 | .88532 | .88543 | .88557 | .88573 | .88591 | .88611 | |
| .20 | .00000 | .00611 | .01221 | .01829 | .02434 | .03034 | .03630 | .04220 | .04803 | .05378 | .05945 | |
| | .77951 | .77958 | .77978 | .78012 | .78059 | .78111 | .78192 | .78278 | .78376 | .78437 | .78609 | |
| .30 | .00000 | .01169 | .02335 | .03495 | .04645 | .05782 | .06904 | .08007 | .09090 | .10146 | .11180 | |
| | .68808 | .68808 | .68825 | .68875 | .68959 | .69075 | .69224 | .69405 | .69617 | .69858 | .70129 | .70427 |
| .40 | .00000 | .01741 | .03477 | .05200 | .06904 | .08585 | .10235 | .11851 | .13425 | .14954 | .16435 | |
| | .61099 | .61099 | .61128 | .61214 | .61358 | .61559 | .61811 | .62124 | .62486 | .62897 | .63357 | .63862 |
| .50 | .00000 | .02277 | .04515 | .06794 | .09016 | .11202 | .13342 | .15429 | .17455 | .19411 | .21291 | |
| | .54646 | .54646 | .54689 | .54812 | .55017 | .55302 | .55666 | .56106 | .56620 | .57205 | .57857 | .58572 |
| .60 | .00000 | .02757 | .05502 | .08224 | .10911 | .13550 | .16131 | .18641 | .21069 | .23405 | .25638 | |
| | .49238 | .49238 | .49290 | .49448 | .49709 | .50072 | .50537 | .51099 | .51575 | .52505 | .53339 | .54253 |
| .70 | .00000 | .03178 | .06343 | .09481 | .12578 | .15620 | .18591 | .21478 | .24265 | .26939 | .29484 | |
| | .44673 | .44673 | .44736 | .44922 | .45232 | .45665 | .46213 | .46890 | .47677 | .48574 | .49575 | .50674 |
| .80 | .00000 | .03543 | .07073 | .10574 | .14031 | .17428 | .20748 | .23972 | .27081 | .30056 | .32100 | |
| | .40793 | .40793 | .40863 | .41074 | .41424 | .41914 | .42544 | .43311 | .44212 | .45242 | .46395 | .47563 |
| .90 | .00000 | .03858 | .07702 | .11519 | .15292 | .19004 | .22635 | .26162 | .29562 | .32811 | .35866 | |
| | .37466 | .37466 | .37545 | .37774 | .38157 | .38694 | .39386 | .40233 | .41233 | .42382 | .43672 | .45094 |
| 1.00 | .00000 | .04128 | .08244 | .12335 | .16385 | .20377 | .24287 | .28090 | .31756 | .35256 | .38560 | |
| | .34598 | .34598 | .34679 | .34922 | .35329 | .35903 | .35646 | .37560 | .38645 | .39898 | .41312 | .42876 |

$$U/K + IV/K' \\ -1 \\ U + IV \equiv SN \quad (A + I(B)$$

K=SIN 25

| | | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A=1.00 |
|------|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 1/8 | | | | | | | | | | | | |
| .10 | | .00000 .89861 | .00139 .89862 | .00278 .89865 | .00415 .89870 | .00555 .89877 | .00693 .89885 | .00831 .89896 | .00968 .89906 | .01105 .89923 | .01241 .89939 | .01377 .89957 |
| .20 | | .00000 .89326 | .00509 .80332 | .01016 .80352 | .01522 .80384 | .02025 .80429 | .02524 .80486 | .03019 .80556 | .03509 .80638 | .03992 .80732 | .04468 .80837 | .04936 .80954 |
| .30 | | .00000 .71773 | .01008 .71790 | .02013 .71926 | .03012 .72044 | .04004 .72195 | .04978 .72378 | .05940 .72592 | .06863 .72836 | .07806 .73109 | .08705 .73408 | .09578 .73408 |
| .40 | | .00000 .64320 | .01547 .64351 | .03088 .64443 | .04616 .64595 | .06125 .64807 | .07603 .65078 | .09062 .65405 | .10478 .65787 | .11850 .66220 | .13180 .66703 | .14456 .67232 |
| .50 | | .00000 .57916 | .02070 .57961 | .04129 .58096 | .06170 .58319 | .08191 .58630 | .10154 .59026 | .12078 .59505 | .13946 .60063 | .15748 .60697 | .17477 .61402 | .19125 .62173 |
| .60 | | .00000 .52439 | .02549 .52197 | .05085 .52672 | .07596 .52962 | .10009 .53365 | .12491 .53883 | .14850 .54504 | .17133 .55231 | .19328 .56058 | .21424 .56978 | .23410 .57984 |
| .7. | | .00000 .47750 | .02975 .47620 | .05935 .48029 | .08866 .48377 | .11753 .48862 | .14581 .49483 | .17333 .50236 | .19994 .51118 | .22547 .52122 | .24976 .53242 | .27268 .54469 |
| .80 | | .00000 .43720 | .03347 .43799 | .06679 .44037 | .09981 .44633 | .13235 .44987 | .16425 .45699 | .19532 .46565 | .22535 .47743 | .25413 .48746 | .28147 .50048 | .30717 .51477 |
| .90 | | .00000 .40240 | .03670 .40326 | .07325 .40586 | .10950 .41021 | .14529 .41630 | .18042 .4241b | .21467 .43378 | .24782 .44514 | .27959 .45619 | .30973 .47284 | .33798 .48695 |
| 1.00 | | .00000 .37216 | .03948 .37216 | .07883 .37585 | .11790 .38702 | .15655 .38604 | .19456 .39446 | .23169 .40589 | .26768 .41026 | .30221 .43254 | .33494 .44868 | .36555 .46652 |

$U/K+IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 30

| A/B | $A=0.00$ | $A= .10$ | $A= .20$ | $A= .30$ | $A= .40$ | $A= .50$ | $A= .60$ | $A= .70$ | $A= .80$ | $A= .90$ | $A=1.00$ |
|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .10 | .00000 .90802 | .00116 .30803 | .00231 .90805 | .00347 .90810 | .00462 .90816 | .00577 .90824 | .00692 .90833 | .00807 .90845 | .00921 .90856 | .01034 .90868 | .01147 .90889 |
| .20 | .00000 .62030 | .00432 .62036 | .00863 .62054 | .01292 .62085 | .01719 .62126 | .02143 .62163 | .02563 .62249 | .02977 .62327 | .03386 .62416 | .03789 .62517 | .04185 .62628 |
| .30 | .00000 .73988 | .00876 .74005 | .01750 .74056 | .02617 .74140 | .03476 .74258 | .04322 .74408 | .05154 .74589 | .05969 .74691 | .06764 .74841 | .07537 .75018 | .08285 .75685 |
| .40 | .00000 .66817 | .01375 .66849 | .02744 .66943 | .04100 .67100 | .05437 .67319 | .06749 .67597 | .08029 .67932 | .09274 .68322 | .10476 .68765 | .11632 .69257 | .12737 .69794 |
| .50 | .00000 .66526 | .01674 .66575 | .03738 .68710 | .05582 .69954 | .07395 .61283 | .09169 .61701 | .10693 .62205 | .12558 .62792 | .14156 .63456 | .15676 .64193 | .17118 .64936 |
| .60 | .00000 .55058 | .02342 .55120 | .04671 .55309 | .06974 .55622 | .09236 .56611 | .11444 .57281 | .13586 .58061 | .15647 .58946 | .17616 .59927 | .19488 .60996 | .21228 .62096 |
| .70 | .00000 .50312 | .02766 .50389 | .05516 .50618 | .08235 .50998 | .10926 .51529 | .13514 .52207 | .16041 .53026 | .18469 .53986 | .20763 .55079 | .22994 .56292 | .24997 .57617 |
| .80 | .00000 .46193 | .03140 .46280 | .06263 .46543 | .09354 .46980 | .12393 .47592 | .15363 .48376 | .18242 .49331 | .21089 .50451 | .23642 .51738 | .26116 .53158 | .28416 .54721 |
| .90 | .00000 .42607 | .03466 .42703 | .06917 .42992 | .10335 .43475 | .13702 .44157 | .16997 .45026 | .20198 .46094 | .23277 .47354 | .26207 .48881 | .28959 .50823 | .31586 .52287 |
| 1.00 | .00000 .39472 | .03749 .39575 | .07485 .39884 | .11190 .40401 | .14846 .41131 | .18436 .42076 | .21929 .43239 | .25297 .44620 | .28505 .46214 | .31517 .48013 | .34297 .50888 |

U/K+IV/R
 -1
 U+IV=SN (a+B)

K=SIN 35

| 1/B | A=0.00 | | | A= .10 | | | A= .20 | | | A= .30 | | | A= .40 | | | A= .50 | | | A= .60 | | | A= .70 | | | A= .80 | | | A= .90 | | | A= 1.00 | | | |
|------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|
| | A=0.00 | A=.10 | A=.20 | A=.30 | A=.40 | A=.50 | A=.60 | A=.70 | A=.80 | A=.90 | A=1.00 | A=1.10 | A=1.20 | A=1.30 | A=1.40 | A=1.50 | A=1.60 | A=1.70 | A=1.80 | A=1.90 | A=2.00 | A=2.10 | A=2.20 | A=2.30 | A=2.40 | A=2.50 | A=2.60 | A=2.70 | A=2.80 | A=2.90 | A=3.00 | | | |
| .10 | .000000 | .000399 | .00197 | .00296 | .00394 | .00492 | .00591 | .00688 | .00785 | .00882 | .00978 | .01075 | .01172 | .01269 | .01366 | .01463 | .01560 | .01657 | .01754 | .01851 | .01948 | .02045 | .02142 | .02239 | .02336 | .02433 | .02530 | .02627 | .02724 | .02821 | .02918 | .03015 | .03155 | .03157 |
| .20 | .000000 | .000373 | .00174 | .00275 | .00374 | .00474 | .00573 | .00672 | .00771 | .00869 | .00967 | .01065 | .01163 | .01261 | .01359 | .01457 | .01555 | .01653 | .01751 | .01849 | .01947 | .02045 | .02143 | .02241 | .02339 | .02437 | .02535 | .02633 | .02731 | .02829 | .02927 | .03025 | .03123 | .03125 |
| .30 | .000000 | .000357 | .00153 | .00255 | .00355 | .00455 | .00555 | .00655 | .00755 | .00855 | .00955 | .01055 | .01155 | .01255 | .01355 | .01455 | .01555 | .01655 | .01755 | .01855 | .01955 | .02055 | .02155 | .02255 | .02355 | .02455 | .02555 | .02655 | .02755 | .02855 | .02955 | .03055 | .03155 | |
| .40 | .000000 | .000341 | .00126 | .00246 | .00365 | .00484 | .00603 | .00722 | .00841 | .00960 | .01079 | .01198 | .01317 | .01436 | .01555 | .01674 | .01793 | .01912 | .02031 | .02150 | .02269 | .02388 | .02507 | .02626 | .02745 | .02864 | .02983 | .03102 | .03221 | .03340 | .03459 | .03578 | .03697 | .03816 |
| .50 | .000000 | .000325 | .00109 | .00231 | .00351 | .00471 | .00591 | .00711 | .00831 | .00951 | .01071 | .01191 | .01311 | .01431 | .01551 | .01671 | .01791 | .01911 | .02031 | .02151 | .02271 | .02391 | .02511 | .02631 | .02751 | .02871 | .02991 | .03111 | .03231 | .03351 | .03471 | .03591 | .03711 | |
| .60 | .000000 | .000309 | .00092 | .00214 | .00336 | .00457 | .00578 | .00699 | .00820 | .00941 | .01062 | .01183 | .01303 | .01424 | .01545 | .01666 | .01787 | .01908 | .02029 | .02150 | .02271 | .02392 | .02513 | .02634 | .02754 | .02875 | .02995 | .03115 | .03235 | .03355 | .03475 | .03595 | .03715 | |
| .70 | .000000 | .000293 | .00075 | .00197 | .00319 | .00442 | .00564 | .00686 | .00808 | .00930 | .01052 | .01174 | .01296 | .01418 | .01540 | .01662 | .01784 | .01906 | .02028 | .02150 | .02272 | .02394 | .02516 | .02638 | .02760 | .02882 | .02994 | .03116 | .03238 | .03360 | .03482 | .03604 | .03725 | |
| .80 | .000000 | .000277 | .00059 | .00180 | .00302 | .00424 | .00547 | .00670 | .00793 | .00916 | .01038 | .01161 | .01284 | .01407 | .01530 | .01653 | .01776 | .01899 | .02022 | .02145 | .02268 | .02391 | .02514 | .02637 | .02760 | .02883 | .02996 | .03118 | .03240 | .03362 | .03484 | .03606 | .03728 | |
| .90 | .000000 | .000261 | .00044 | .00164 | .00287 | .00409 | .00532 | .00655 | .00778 | .00901 | .01023 | .01146 | .01269 | .01392 | .01515 | .01638 | .01761 | .01884 | .02007 | .02130 | .02253 | .02376 | .02500 | .02623 | .02746 | .02869 | .02992 | .03114 | .03236 | .03358 | .03480 | .03602 | .03724 | |
| 1.00 | .000000 | .000245 | .00029 | .00149 | .00273 | .00397 | .00521 | .00645 | .00769 | .00893 | .01016 | .01141 | .01266 | .01391 | .01516 | .01641 | .01766 | .01891 | .02016 | .02141 | .02266 | .02391 | .02516 | .02641 | .02766 | .02891 | .02993 | .03115 | .03237 | .03360 | .03482 | .03604 | .03725 | |

$$\begin{aligned} U/K+IV/K' \\ -1 \\ U+IV-SH \quad (A+I(B) \end{aligned}$$

K=SIN 40

| I/B | $A=0.00$ | $A=+10$ | $A=+20$ | $A=+30$ | $A=+40$ | $A=+50$ | $A=+60$ | $A=+70$ | $A=+80$ | $A=+90$ | $A=+100$ |
|--------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| -10 | .00000 | .00086 | .00171 | .00257 | .00342 | .00427 | .00512 | .00596 | .00681 | .00765 | .00848 |
| .92008 | .92009 | .92011 | .92015 | .92020 | .92027 | .92036 | .92046 | .92057 | .92070 | .92085 | .92100 |
| .20 | .00000 | .00326 | .00651 | .00975 | .01297 | .01617 | .01933 | .02245 | .02553 | .02855 | .03152 |
| .84276 | .84282 | .84299 | .84327 | .84366 | .84415 | .84477 | .84548 | .84639 | .84721 | .84822 | .84923 |
| .30 | .00000 | .00680 | .01357 | .02029 | .02693 | .03346 | .03987 | .04614 | .05223 | .05813 | .06383 |
| .77014 | .77031 | .77060 | .77161 | .77274 | .77418 | .77592 | .77794 | .78024 | .78288 | .78568 | .78848 |
| .40 | .00000 | .01097 | .02188 | .03267 | .04329 | .05367 | .06376 | .07351 | .08268 | .09182 | .10038 |
| .70354 | .70386 | .70482 | .70641 | .70861 | .71141 | .71478 | .71869 | .72311 | .72799 | .73329 | .73863 |
| .50 | .00000 | .01535 | .03060 | .04564 | .06039 | .07473 | .08859 | .10187 | .11449 | .12638 | .13746 |
| .64349 | .64400 | .64550 | .64800 | .65146 | .65586 | .66114 | .66725 | .67414 | .68172 | .68933 | .69793 |
| .60 | .00000 | .01962 | .03911 | .05831 | .07709 | .09531 | .11283 | .12952 | .14527 | .15995 | .17347 |
| .58996 | .59065 | .59272 | .59614 | .60089 | .60692 | .61416 | .62259 | .63287 | .64258 | .65377 | .66456 |
| .70 | .00000 | .02361 | .04705 | .07015 | .09273 | .11462 | .13563 | .15558 | .17429 | .19161 | .20738 |
| .54255 | .54342 | .54599 | .55028 | .55623 | .56302 | .57298 | .58362 | .59564 | .60889 | .62322 | .63756 |
| .80 | .00000 | .02722 | .05426 | .08093 | .10701 | .13231 | .15660 | .17963 | .20118 | .22101 | .23691 |
| .50068 | .50169 | .50471 | .50974 | .51676 | .52574 | .53663 | .54934 | .56377 | .57973 | .59784 | .61674 |
| .90 | .00000 | .03044 | .06069 | .09056 | .11984 | .14826 | .17563 | .20158 | .22584 | .24808 | .26811 |
| .46372 | .46485 | .46823 | .47368 | .48179 | .49197 | .50438 | .51896 | .53560 | .55412 | .57428 | .59446 |
| 1.00 | .00000 | .03326 | .06635 | .09908 | .13124 | .16257 | .19277 | .22149 | .24834 | .27291 | .29482 |
| .43104 | .43226 | .43592 | .44206 | .45069 | .46186 | .47558 | .49181 | .51846 | .53136 | .55423 | .57713 |

$U/V+IV/K'$
 -1
 $U+IV=SN^- (A+IB)$

K=SIN 45

| | | A=.10 | A=.20 | A=.30 | A=.40 | A=.50 | A=.60 | A=.70 | A=.80 | A=.90 | A=1.00 |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| .10 | .00000 | .00075 | .00150 | .00225 | .00300 | .00375 | .00449 | .00524 | .00598 | .00671 | .00744 |
| | .92410 | .92411 | .92413 | .92417 | .92422 | .92429 | .92437 | .92446 | .92457 | .92467 | .92468 |
| .20 | .00000 | .00268 | .00575 | .00861 | .01145 | .01427 | .01706 | .01981 | .02253 | .02520 | .02781 |
| | .85039 | .85044 | .85061 | .85068 | .85125 | .85174 | .85232 | .85301 | .85379 | .85467 | .85565 |
| .30 | .00000 | .00605 | .01207 | .01805 | .02395 | .02975 | .03546 | .04102 | .04642 | .05165 | .05669 |
| | .78067 | .78083 | .78131 | .78211 | .78321 | .78462 | .78632 | .78830 | .79054 | .79384 | .79576 |
| .40 | .00000 | .00985 | .01965 | .02933 | .03884 | .04814 | .05716 | .06586 | .07428 | .08215 | .08966 |
| | .71617 | .71649 | .71745 | .71903 | .72122 | .72400 | .72734 | .73122 | .73559 | .74841 | .74564 |
| .50 | .00000 | .01391 | .02772 | .04133 | .05465 | .06759 | .08005 | .09196 | .10323 | .11381 | .12365 |
| | .65750 | .65801 | .65953 | .66205 | .66555 | .66998 | .67530 | .68144 | .68834 | .69592 | .70411 |
| .60 | .00000 | .01793 | .03572 | .05323 | .07032 | .08685 | .10270 | .11774 | .13184 | .14491 | .15687 |
| | .7473 | .60544 | .60755 | .61107 | .61593 | .62210 | .62950 | .63806 | .64767 | .65821 | .66955 |
| .70 | .00000 | .02173 | .04329 | .06450 | .08519 | .10517 | .12427 | .14231 | .15912 | .17454 | .18845 |
| | .55763 | .55852 | .56120 | .56565 | .57132 | .57967 | .58912 | .60007 | .61239 | .62592 | .64848 |
| .80 | .00000 | .02521 | .05023 | .07487 | .09891 | .12213 | .14432 | .16523 | .18463 | .20230 | .21885 |
| | .51575 | .51680 | .51998 | .52525 | .53258 | .54193 | .55333 | .56655 | .58148 | .59793 | .61566 |
| .90 | .00000 | .02834 | .05648 | .08423 | .11134 | .13753 | .16269 | .18635 | .20825 | .22889 | .24559 |
| | .47975 | .48333 | .48930 | .49766 | .50831 | .52144 | .53673 | .55411 | .57335 | .59418 | .59532 |
| 1.00 | .00000 | .03111 | .06203 | .09257 | .12249 | .15153 | .17937 | .20565 | .22998 | .25193 | .27115 |
| | .44551 | .44681 | .45072 | .45725 | .46643 | .47830 | .49284 | .50999 | .52963 | .55152 | .57532 |

$U/K + IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 50

| $A = 0.00$ | $A = .10$ | $A = .20$ | $A = .30$ | $A = .40$ | $A = .50$ | $A = .60$ | $A = .70$ | $A = .80$ | $A = .90$ | $A = 1.00$ |
|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .10 -.92727 | .00067 .92730 | .01133 .92733 | .00199 .92738 | .00266 .92744 | .00332 .92752 | .00398 .92761 | .00464 .92772 | .00529 .92781 | .00594 .92797 | .00659 .92797 |
| .20 -.85643 | .00256 .85648 | .00511 .85664 | .00765 .85690 | .01016 .85727 | .01269 .85773 | .01516 .85830 | .01761 .85897 | .02002 .85973 | .02239 .85058 | .02472 .86152 |
| .30 -.78910 | .00000 .78910 | .00541 .78925 | .01080 .78972 | .01614 .79050 | .02142 .79158 | .02661 .79296 | .03169 .79462 | .03665 .79656 | .04147 .79875 | .04613 .80119 |
| .40 .72540 | .00000 .72540 | .00887 .72672 | .01769 .72766 | .02640 .72923 | .03496 .73140 | .04330 .73416 | .05140 .73747 | .05919 .74130 | .06666 .74561 | .07375 .75037 |
| .50 .66896 | .00000 .66896 | .01261 .66947 | .02513 .67101 | .03746 .67354 | .04951 .67705 | .06119 .68149 | .07242 .68681 | .08312 .69295 | .09323 .69984 | .10269 .70738 |
| .60 .61695 | .00000 .61767 | .01637 .61983 | .03260 .62340 | .04855 .62833 | .06410 .63459 | .07911 .64208 | .09345 .65072 | .10700 .66039 | .11966 .67097 | .13134 .68231 |
| .70 .57023 | .00000 .57115 | .01996 .57391 | .03974 .57847 | .05918 .58480 | .07810 .59284 | .09632 .60250 | .11367 .61365 | .12997 .62616 | .14508 .63985 | .17115 .65451 |
| .80 .52845 | .00000 .52955 | .02328 .53284 | .04636 .53630 | .06905 .54591 | .09114 .55561 | .11241 .56731 | .13264 .58089 | .15159 .59617 | .16904 .61293 | .19864 .63890 |
| .90 .49116 | .00000 .49241 | .02629 .49615 | .05237 .50239 | .07804 .51111 | .10307 .52223 | .12720 .53585 | .15016 .55168 | .17166 .56960 | .19139 .58935 | .22444 .61058 |
| 1.00 .45789 | .00000 .45926 | .02897 .46337 | .05774 .47024 | .08611 .47989 | .11383 .49233 | .14064 .49233 | .16620 .50755 | .19015 .52544 | .21209 .54583 | .23166 .56843 |

$U/K+IV/K'$
 -1
 $U+IV=SN$ (A+IB)

K=SIN 55

| $1/B$ | $A=0.00$ | $A= .10$ | $A= .20$ | $A= .30$ | $A= .40$ | $A= .50$ | $A= .60$ | $A= .70$ | $A= .80$ | $A= .90$ | $A=1.00$ |
|-------|------------------|------------------|-------------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| .10 | .00000 .92976 | .00059 .92980 | .00110 .92984 | .00170 .92989 | .00237 .92995 | .00296 .92995 | .00356 .93002 | .00413 .93011 | .00471 .93021 | .00529 .93033 | .00567 .93046 |
| .20 | .00000 .86124 | .00029 .86130 | .00057 .86145 | .00084 .86170 | .00099 .86206 | .00133 .86251 | .001354 .86306 | .001573 .86371 | .001768 .86445 | .002000 .86526 | .002287 .86619 |
| .30 | .00000 .79586 | .00085 .79601 | .001969 .79647 | .01446 .79630 | .01921 .79630 | .02386 .79965 | .02842 .80126 | .03286 .80317 | .03717 .80532 | .04134 .80771 | .04535 .81032 |
| .40 | .00000 .73466 | .00000 .73500 | .01595 .73593 | .02380 .73749 | .03151 .73964 | .03502 .74237 | .04630 .74564 | .05330 .74942 | .06000 .75368 | .06635 .75837 | .07234 .76345 |
| .50 | .00000 .67633 | .00000 .67684 | .02278 .68036 | .03395 .68292 | .04485 .68643 | .05541 .69086 | .06554 .69617 | .07518 .70229 | .08426 .70914 | .09273 .71664 | .10055 .72469 |
| .60 | .00000 .62703 | .00000 .62776 | .02971 .62994 | .04423 .63355 | .05836 .63853 | .07197 .64483 | .08495 .65237 | .09718 .66105 | .10856 .67074 | .11981 .68132 | .12847 .69263 |
| .70 | .00000 .58071 | .00000 .58165 | .03639 .58446 | .05417 .58911 | .07143 .59556 | .08802 .60373 | .10376 .61353 | .11850 .62462 | .13208 .63744 | .14436 .65120 | .15531 .66588 |
| .80 | .00000 .53908 | .00000 .54021 | .04264 .54366 | .06348 .54922 | .08372 .55703 | .10314 .56696 | .12154 .57892 | .13870 .59275 | .15440 .60827 | .16846 .62522 | .18872 .64330 |
| .90 | .00000 .50176 | .00000 .50308 | .02428 .50695 | .04836 .51341 | .07202 .52242 | .09503 .53395 | .11714 .54791 | .13609 .56415 | .15758 .56415 | .17533 .58245 | .19108 .60252 |
| 1.00 | .00000 .46836 | .02685 .46981 | .05350 .47409 | .07973 .48124 | .10531 .49126 | .12996 .50419 | .15332 .51994 | .17507 .53841 | .19483 .55936 | .21224 .58246 | .22697 .60723 |

$U/K + IV/K'$
 -1
 $U+IV = SN \quad (A+IB)$

K=SIN 60

| $1/f_z$ | $A=0.00$ | $A= .10$ | $A= .20$ | $A= .30$ | $A= .40$ | $A= .50$ | $A= .60$ | $A= .70$ | $A= .80$ | $A= .90$ | $A= 1.00$ |
|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| .10 | .00000 | *.00053 | *.00106 | *.00159 | *.00211 | *.00264 | *.00316 | *.00369 | *.00421 | *.00473 | *.00524 |
| | .93177 | .93177 | .93179 | .93183 | .93187 | .93193 | .93201 | .93205 | .93219 | .93230 | .93243 |
| .20 | .00000 | *.00050 | *.0009 | *.00112 | *.0014 | *.01014 | *.01212 | *.01408 | *.01600 | *.01790 | *.01975 |
| | .86504 | .86513 | .86528 | .86553 | .86587 | .86632 | .86636 | .86749 | .86821 | .86902 | .86991 |
| .30 | .00000 | *.00036 | *.00070 | *.01300 | *.01725 | *.02143 | *.02551 | *.02950 | *.03336 | *.03710 | *.04063 |
| | .80127 | .80143 | .80188 | .80263 | .80367 | .80500 | .80658 | .80846 | .81057 | .81292 | .81546 |
| .40 | .00000 | *.00721 | *.01438 | *.02146 | *.02840 | *.03516 | *.04171 | *.04800 | *.05402 | *.05972 | *.06508 |
| | .74136 | .74167 | .74260 | .74414 | .74627 | .74897 | .75221 | .75595 | .76116 | .76479 | .76973 |
| .50 | .00000 | *.01035 | *.02063 | *.03073 | *.04059 | *.05012 | *.05926 | *.06793 | *.07689 | *.08359 | *.09069 |
| | .68645 | .68654 | .68799 | .69052 | .69402 | .69845 | .70374 | .70983 | .71653 | .72407 | .73205 |
| .60 | .00000 | *.01357 | *.02701 | *.04020 | *.05301 | *.06534 | *.07707 | *.08809 | *.09833 | *.10769 | *.11613 |
| | .63527 | .63601 | .63820 | .64183 | .64684 | .65318 | .66074 | .66943 | .67911 | .68966 | .70031 |
| .70 | .00000 | *.01669 | *.03322 | *.04942 | *.06513 | *.08013 | *.09445 | *.10775 | *.11995 | *.13096 | *.14068 |
| | .58933 | .59028 | .59314 | .59786 | .60439 | .61265 | .62254 | .63391 | .64659 | .66038 | .67584 |
| .80 | .00000 | *.01962 | *.03906 | *.05811 | *.07659 | *.09427 | *.11097 | *.12647 | *.14857 | *.15312 | *.16399 |
| | .54769 | .54905 | .55251 | .55524 | .56620 | .57631 | .58846 | .60247 | .61814 | .63519 | .65331 |
| .90 | .00000 | *.02232 | *.04464 | *.06614 | *.08720 | *.10739 | *.12643 | *.14405 | *.15100 | *.17403 | *.18596 |
| | .51063 | .51196 | .51594 | .52257 | .53182 | .54362 | .55787 | .57441 | .59298 | .61326 | .63482 |
| 1.00 | .00000 | *.02475 | *.04930 | *.07344 | *.09691 | *.11945 | *.14074 | *.16043 | *.17516 | *.19365 | *.20654 |
| | .47716 | .47863 | .48305 | .49047 | .50078 | .51408 | .53025 | .54914 | .57850 | .59392 | .61890 |

$U/K+IV/K'$
 $U+IV = SN^{-1} (A+IB)$

K=SIN 65

| $1/B$ | $A=0.00$ | $A=.10$ | $A=.20$ | $A=.30$ | $A=.40$ | $A=.50$ | $A=.60$ | $A=.70$ | $A=.80$ | $A=.90$ | $A=1.00$ |
|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .10 | .00000 .93333 | .00047 .93334 | .00094 .93336 | .00142 .93339 | .00189 .93344 | .00236 .93350 | .00283 .93357 | .00329 .93365 | .00376 .93375 | .00422 .93386 | .00464 .93396 |
| .20 | .00000 .86812 | .00183 .86815 | .00366 .86830 | .00547 .86854 | .00726 .86888 | .00907 .86932 | .01084 .86985 | .01259 .87047 | .01431 .87117 | .01600 .87197 | .01766 .87284 |
| .30 | .00000 .86557 | .00391 .80571 | .00780 .80615 | .01166 .80690 | .01547 .80793 | .01921 .80924 | .02287 .81082 | .02644 .81265 | .02990 .81473 | .03325 .81704 | .03646 .81956 |
| .40 | .00000 .74668 | .00649 .74698 | .01293 .74791 | .01930 .74943 | .02553 .75155 | .03161 .75422 | .03749 .75743 | .04314 .76113 | .04853 .76530 | .05363 .76988 | .05844 .77482 |
| .50 | .00000 .69203 | .00934 .69255 | .01861 .69408 | .02772 .69661 | .03660 .70010 | .04519 .70451 | .05341 .70978 | .06120 .71583 | .06852 .72260 | .07533 .72996 | .08158 .73789 |
| .60 | .00000 .64191 | .01226 .64265 | .02445 .64486 | .03636 .64850 | .04796 .65353 | .05903 .65987 | .06962 .66744 | .07956 .67613 | .08674 .68580 | .09312 .69639 | .10465 .70749 |
| .70 | .00000 .59631 | .01516 .59728 | .03016 .60016 | .04485 .60493 | .05509 .61152 | .07271 .61985 | .08557 .62979 | .09753 .64121 | .10846 .65392 | .11831 .66770 | .12696 .68232 |
| .80 | .00000 .55506 | .01766 .55624 | .03557 .55975 | .05290 .56557 | .06967 .57365 | .08570 .58389 | .10076 .59617 | .11473 .61030 | .12737 .62606 | .13856 .64316 | .14819 .66127 |
| .90 | .00000 .51766 | .02036 .51922 | .04057 .52329 | .06036 .53005 | .07953 .53947 | .09785 .55141 | .11507 .56596 | .13095 .58271 | .14523 .60146 | .15771 .62186 | .16823 .64346 |
| 1.00 | .00000 .43435 | .02266 .46587 | .04512 .49041 | .06716 .49797 | .08858 .50857 | .10908 .52216 | .12836 .53865 | .14611 .55786 | .16201 .57950 | .17574 .60314 | .18789 .62622 |

$U/K + IV/K'$
 $U+IV = SN_{-1}^{+}(A+IB)$

K=SIN 70

| $1/B$ | $A = 0.00$ | $A = .10$ | $A = .20$ | $A = .30$ | $A = .40$ | $A = .50$ | $A = .60$ | $A = .70$ | $A = .80$ | $A = .90$ | $A = 1.00$ |
|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .10 | .00000 .93454 | .00042 .93455 | .00084 .93457 | .00126 .93460 | .00168 .93465 | .00210 .93470 | .00251 .93477 | .00293 .93486 | .00334 .93495 | .00375 .93496 | .00416 .93518 |
| .20 | .00000 .87044 | .00163 .87049 | .00326 .87064 | .00487 .87088 | .00646 .87121 | .00806 .87164 | .00965 .87216 | .01121 .87277 | .01274 .87347 | .01425 .87425 | .01573 .87511 |
| .30 | .00000 .86890 | .00349 .86904 | .00696 .86949 | .01040 .86990 | .01380 .87022 | .01714 .87123 | .02040 .87125 | .02358 .87159 | .02667 .87179 | .02965 .87203 | .03251 .87227 |
| .40 | .00000 .75082 | .00580 .75113 | .01156 .75204 | .01725 .75356 | .02283 .75565 | .02826 .75831 | .03351 .76149 | .03855 .76516 | .04333 .76929 | .04791 .77382 | .05210 .77672 |
| .50 | .00000 .69688 | .00638 .69731 | .01666 .69884 | .02484 .70136 | .03280 .70485 | .04048 .70924 | .04783 .71449 | .05479 .72051 | .06133 .72724 | .06739 .73458 | .07296 .74243 |
| .60 | .00000 .64713 | .01104 .64787 | .02197 .65008 | .03268 .65373 | .04307 .65677 | .05304 .66512 | .06250 .67269 | .07136 .68135 | .07955 .69181 | .08781 .70148 | .09378 .71261 |
| .70 | .00000 .60183 | .01365 .60280 | .02717 .60570 | .04039 .61050 | .05319 .61713 | .06541 .62550 | .07694 .63549 | .08764 .64693 | .09740 .65964 | .10614 .67342 | .11389 .68798 |
| .80 | .00000 .56074 | .01614 .56193 | .03211 .56549 | .04774 .57137 | .06284 .57953 | .07725 .58987 | .09078 .60224 | .10326 .61645 | .11453 .63226 | .12446 .64938 | .13296 .66747 |
| .90 | .00000 .52361 | .01844 .52499 | .03670 .52912 | .05458 .53599 | .07188 .54555 | .08837 .55771 | .10383 .57235 | .11804 .58924 | .13876 .60811 | .1482 .62856 | .15107 .65019 |
| 1.00 | .00000 .49010 | .02054 .49163 | .04090 .49627 | .06086 .50398 | .08020 .51477 | .09868 .52856 | .11601 .54531 | .13190 .56476 | .14604 .58659 | .15818 .61035 | .16813 .63547 |

$U/K+IV/K'$
 $U+IV=SN$ $(A+IB)$
 -1

K=SIN 75

| | 1/B | A=0.00 | A= .10 | A= .20 | A= .30 | A= .40 | A= .50 | A= .60 | A= .70 | A= .80 | A= .90 | A= 1.00 |
|------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------|
| .10 | .00000 .93544 | .00037 .93545 | .00074 .93547 | .00111 .93550 | .00148 .93554 | .00185 .93560 | .00221 .93567 | .00258 .93575 | .00294 .93585 | .00331 .93595 | .00367 .93607 | |
| .20 | .00000 .87219 | .00144 .87223 | .00287 .87238 | .00430 .87261 | .00571 .87295 | .00712 .87337 | .00851 .87388 | .00988 .87449 | .01123 .87518 | .01256 .87595 | .01386 .87680 | |
| .30 | .00000 .81138 | .00308 .81153 | .00614 .81197 | .00918 .81269 | .01217 .81370 | .01512 .81498 | .01810 .81652 | .02081 .81632 | .02353 .82035 | .02615 .82261 | .02868 .82587 | |
| .40 | .00000 .75392 | .00513 .75423 | .01022 .75514 | .01525 .75664 | .02017 .75873 | .02497 .75136 | .02960 .76453 | .03405 .76817 | .03830 .77227 | .04231 .77677 | .04688 .78163 | |
| .50 | .00000 .70038 | .00742 .70089 | .01477 .70242 | .02195 .70493 | .02903 .70841 | .03583 .71279 | .04232 .71602 | .04847 .72402 | .05424 .73071 | .05959 .73801 | .06449 .74582 | |
| .60 | .00000 .65106 | .00979 .65110 | .01948 .65402 | .02898 .65767 | .03819 .66271 | .04702 .66906 | .05539 .67663 | .06322 .68529 | .07044 .69491 | .07782 .70434 | .08290 .71642 | |
| .70 | .00000 .60599 | .01214 .60697 | .02414 .60689 | .03588 .61471 | .04724 .62136 | .05808 .62976 | .06828 .63977 | .07773 .65123 | .08635 .66394 | .09404 .67768 | .10076 .69221 | |
| .80 | .00000 .56505 | .01437 .56625 | .02658 .53983 | .04248 .57577 | .05590 .58398 | .06869 .59458 | .08067 .60681 | .09170 .62108 | .10163 .63692 | .11036 .65484 | .11781 .67269 | |
| .90 | .00000 .52798 | .01645 .52938 | .03272 .53356 | .04864 .54050 | .06403 .55016 | .07668 .56243 | .09239 .57718 | .10494 .59418 | .11615 .61312 | .12585 .63362 | .13393 .65521 | |
| 1.00 | .00000 .49448 | .01634 .49605 | .03651 .50074 | .05431 .50856 | .07155 .51948 | .08797 .53346 | .10374 .55036 | .11739 .56997 | .12984 .58193 | .14048 .61577 | .14913 .64049 | |

$U/K+IV/K'$
 -1
 $U+IV = SN \quad (A+IB)$

K=SIN 80

| 1/8 | | A=0.00 | A= .10 | A= .20 | B= -.30 | A= .40 | A= .50 | A= .50 | B= .70 | A= .70 | A= .90 | A= 1.00 |
|------|--------|--------|--------|--------|---------|--------|--------|---------|--------|--------|---------|---------|
| .10 | .00000 | .00032 | .00064 | .00096 | .00095 | .00127 | .00159 | .00191 | .00222 | .00253 | .00285 | .00316 |
| | .93606 | .93607 | .93609 | .93611 | .93612 | .93616 | .93617 | .93629 | .93637 | .93646 | .93657 | .93669 |
| .20 | .00000 | .00124 | .00247 | .00432 | .00613 | .00733 | .00851 | .00968 | .01082 | .01194 | .01282 | .01394 |
| | .67339 | .67344 | .67358 | .67415 | .67457 | .67508 | .67567 | .67636 | .67712 | .67797 | .67876 | .67977 |
| .30 | .00006 | .00265 | .00530 | .01050 | .01304 | .01552 | .01794 | .02029 | .02255 | .02473 | .02670 | .02877 |
| | .81311 | .81325 | .81369 | .81541 | .81663 | .81821 | .82080 | .82282 | .82426 | .82670 | .82877 | .83074 |
| .40 | .00000 | .00443 | .00882 | .01741 | .02155 | .02555 | .02939 | .03305 | .03651 | .03976 | .04305 | .04631 |
| | .75607 | .75638 | .75729 | .76086 | .76343 | .76663 | .77026 | .77434 | .77882 | .78365 | .78842 | .79319 |
| .50 | .00000 | .00641 | .01277 | .02509 | .03096 | .03657 | .04188 | .04685 | .05146 | .05568 | .05987 | .06397 |
| | .70288 | .70339 | .70491 | .71038 | .71525 | .72047 | .72645 | .73312 | .74039 | .74816 | .75616 | .76416 |
| .60 | .00000 | .00847 | .01686 | .03118 | .03304 | .04063 | .04730 | .05466 | .06189 | .06656 | .07162 | .07678 |
| | .65380 | .65454 | .65676 | .66546 | .67181 | .67937 | .68602 | .69762 | .70883 | .71987 | .73091 | .74205 |
| .70 | .00000 | .01052 | .02092 | .03119 | .04092 | .05023 | .05911 | .06727 | .07478 | .08132 | .08718 | .09302 |
| | .60891 | .60989 | .61281 | .62155 | .62432 | .63273 | .64276 | .65422 | .66692 | .68065 | .69514 | .71065 |
| .80 | .00000 | .01247 | .02480 | .03535 | .04648 | .05954 | .06990 | .07943 | .08799 | .09549 | .103185 | .11085 |
| | .56807 | .56927 | .57288 | .57984 | .58710 | .59754 | .61001 | .62430 | .64016 | .65728 | .67530 | .69338 |
| .90 | .00000 | .01429 | .02842 | .03224 | .05558 | .06827 | .08613 | .09097 | .10862 | .11587 | .12312 | .13085 |
| | .53105 | .53246 | .53667 | .53887 | .55339 | .56574 | .58056 | .59762 | .61661 | .63712 | .65869 | .67877 |
| 1.00 | .00000 | .01595 | .03174 | .03721 | .06217 | .07641 | .08970 | .101182 | .11255 | .12167 | .12986 | .13805 |
| | .49756 | .49914 | .50388 | .50588 | .52279 | .53683 | .55390 | .57361 | .59366 | .61954 | .64465 | .67074 |

$U/K+IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 85

| 1/B | A=0.00 | | A=.10 | | A=.20 | | A=.30 | | A=.40 | | A=.50 | | A=.60 | | A=.70 | | A=.80 | | A=.90 | | A=1.00 | |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| | | | | | | | | | | | | | | | | | | | | | | |
| .18 | .00000 | .00026 | .00052 | .00078 | .00104 | .00129 | .00155 | .00181 | .00206 | .00232 | .00257 | .00282 | .00307 | .00333 | .00359 | .00385 | .00411 | .00437 | .00463 | .00489 | .00515 | |
| | .93643 | .93643 | .93645 | .93646 | .93653 | .93656 | .93665 | .93673 | .93683 | .93693 | .93705 | .93715 | .93725 | .93735 | .93745 | .93755 | .93765 | .93775 | .93785 | .93795 | .93805 | |
| .20 | .00000 | .00101 | .00201 | .00301 | .00401 | .00493 | .00597 | .00693 | .00788 | .00881 | .00972 | .01065 | .01158 | .01251 | .01344 | .01437 | .01530 | .01623 | .01716 | .01809 | .01902 | |
| | .67410 | .67415 | .67429 | .67452 | .67485 | .67527 | .67570 | .67637 | .67705 | .67781 | .67855 | .67931 | .67988 | .68045 | .68102 | .68159 | .68216 | .68273 | .68330 | .68387 | .68444 | |
| .39 | .00000 | .00216 | .00431 | .00644 | .00855 | .01062 | .01264 | .01461 | .01652 | .01836 | .02020 | .02203 | .02395 | .02589 | .02783 | .02976 | .03169 | .03363 | .03556 | .03749 | .03943 | |
| | .61412 | .61426 | .61470 | .61541 | .61641 | .61768 | .61921 | .62094 | .62268 | .62441 | .62614 | .62787 | .62960 | .63133 | .63306 | .63479 | .63652 | .63825 | .63998 | .64171 | .64344 | |
| .36 | .00000 | .00361 | .00719 | .01073 | .01419 | .01756 | .02082 | .02395 | .02692 | .02994 | .03297 | .03590 | .03893 | .04196 | .04499 | .04792 | .05095 | .05398 | .05691 | .05994 | .06297 | |
| | .75734 | .75765 | .75855 | .76005 | .76212 | .76473 | .76737 | .77149 | .77556 | .77963 | .78370 | .78777 | .79184 | .79591 | .79998 | .80395 | .80792 | .81190 | .81587 | .81984 | .82381 | |
| .40 | .00000 | .00523 | .01041 | .01550 | .02046 | .02524 | .02981 | .03413 | .03810 | .04194 | .04537 | .04920 | .05303 | .05686 | .06069 | .06452 | .06835 | .07218 | .07594 | .07971 | .08354 | |
| | .70435 | .70486 | .70638 | .70888 | .71234 | .71671 | .72191 | .72789 | .73354 | .73926 | .74503 | .75070 | .75647 | .76224 | .76801 | .77378 | .77951 | .78527 | .79104 | .79681 | .80257 | |
| .60 | .00000 | .00692 | .01376 | .02047 | .02696 | .03313 | .03988 | .04658 | .05331 | .06098 | .06863 | .07622 | .08408 | .09183 | .09958 | .09735 | .09510 | .09285 | .09050 | .08815 | .08580 | |
| | .65542 | .65616 | .65838 | .66204 | .66670 | .67343 | .68098 | .68863 | .69628 | .70403 | .71178 | .71953 | .72728 | .73503 | .74278 | .75053 | .75828 | .76603 | .77378 | .78153 | .78923 | |
| .70 | .01000 | .00659 | .01708 | .02539 | .03341 | .04106 | .04824 | .05600 | .06406 | .07212 | .08018 | .08824 | .09630 | .10436 | .11242 | .12048 | .12854 | .13660 | .14466 | .15272 | .16078 | |
| | .61063 | .61161 | .61454 | .61939 | .62607 | .63449 | .64452 | .65598 | .66668 | .67829 | .69086 | .70346 | .71606 | .72866 | .74126 | .75386 | .76646 | .77806 | .79066 | .80329 | .81586 | |
| .80 | .00000 | .01019 | .02026 | .03011 | .03960 | .04864 | .05709 | .06648 | .07514 | .08421 | .09328 | .10235 | .11142 | .12050 | .12957 | .13864 | .14771 | .15678 | .16585 | .17492 | .18399 | |
| | .56965 | .57106 | .57468 | .58066 | .58694 | .59941 | .61190 | .62421 | .63652 | .64883 | .66114 | .67345 | .68576 | .69807 | .71038 | .72269 | .73500 | .74731 | .75962 | .77193 | .78424 | |
| .90 | .00000 | .01158 | .02324 | .03454 | .04544 | .05580 | .06547 | .07430 | .08313 | .09206 | .10109 | .11002 | .11905 | .12808 | .13711 | .14614 | .15517 | .16420 | .17323 | .18226 | .19129 | |
| | .53287 | .53429 | .53852 | .54554 | .55530 | .56761 | .58255 | .59965 | .61667 | .63370 | .65073 | .66776 | .68479 | .70182 | .71885 | .73588 | .75291 | .76994 | .78697 | .80399 | .82092 | |
| 1.00 | .00000 | .01305 | .02597 | .03862 | .05085 | .06249 | .07333 | .08426 | .09520 | .10613 | .11706 | .12799 | .13892 | .14985 | .16078 | .17171 | .18264 | .19357 | .20450 | .21543 | .22636 | |
| | .49939 | .50096 | .50575 | .51368 | .52476 | .53691 | .55599 | .57577 | .59785 | .6192 | .64023 | .66116 | .68219 | .70312 | .72415 | .74518 | .76611 | .78714 | .80817 | .82919 | .85012 | |

$U/K+IV/K'$
 -1
 $U+IV=SK \quad (A+IB)$

K=SIN 86

| $A = 0.00$ | $A = .10$ | $A = .20$ | $A = .30$ | $A = .40$ | $A = .50$ | $A = .60$ | $A = .70$ | $A = .80$ | $A = .90$ | $A = 1.00$ |
|--------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| .10 .00000 .93647 | .00024 .93650 | .00049 .93653 | .00073 .93657 | .00098 .93663 | .00122 .93667 | .00146 .93670 | .00171 .93678 | .00195 .93687 | .00219 .93697 | .00243 .93709 |
| .20 .00000 .87418 | .00095 .87423 | .00190 .87437 | .00264 .87461 | .00376 .87493 | .00471 .87537 | .00563 .87586 | .00654 .87645 | .00744 .87713 | .00832 .87790 | .00916 .87874 |
| .30 .00000 .81424 | .00204 .81438 | .00407 .81462 | .00609 .81553 | .00807 .81653 | .01003 .81780 | .01193 .81932 | .01379 .82110 | .01560 .82311 | .01734 .82534 | .01901 .82778 |
| .40 .00000 .75749 | .00341 .75780 | .00679 .75870 | .01134 .76020 | .01340 .76227 | .01658 .76488 | .01766 .76882 | .02261 .77164 | .02542 .77570 | .02809 .78016 | .03056 .78497 |
| .50 .00000 .70452 | .006494 .70503 | .00983 .70655 | .01464 .70906 | .01932 .71252 | .02384 .71628 | .02815 .72099 | .03224 .72886 | .03606 .73471 | .03960 .74196 | .04285 .74971 |
| .60 .00000 .65562 | .00653 .65236 | .00953 .65857 | .01300 .66223 | .01933 .66727 | .02546 .67362 | .03134 .68118 | .03691 .68982 | .04211 .69941 | .04898 .70988 | .05514 .72081 |
| .70 .00000 .61083 | .00811 .61182 | .01614 .61475 | .02398 .61959 | .03156 .62628 | .03873 .63470 | .04557 .64473 | .05185 .65619 | .05756 .66689 | .06264 .68264 | .06787 .69787 |
| .80 .00000 .57007 | .00963 .57128 | .01914 .57490 | .02844 .58088 | .03741 .58916 | .04594 .59962 | .05392 .61212 | .06125 .62644 | .06783 .64230 | .07356 .65941 | .07848 .57741 |
| .90 .00000 .53309 | .01104 .53450 | .02195 .53674 | .03263 .54577 | .04292 .55553 | .05271 .56793 | .06184 .58279 | .07018 .59990 | .07760 .61092 | .08399 .61892 | .08926 .63943 |
| 1.00 .00000 .49961 | .01233 .50123 | .02454 .50597 | .03649 .51391 | .04604 .52499 | .05902 .53915 | .06927 .55624 | .07868 .57682 | .08683 .59812 | .09382 .62202 | .09946 .64712 |

$U/K + IV/K'$
 -1
 $U+IV = SN \quad (A+IB)$

K=SIN 67

| $1/B$ | $A=0.00$ | $A=0.10$ | $A=0.20$ | $A=0.30$ | $A=0.40$ | $A=0.50$ | $A=0.60$ | $A=0.70$ | $A=0.80$ | $A=0.90$ | $A=1.00$ |
|-------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| .10 | .00000 .93651 | .00023 .93651 | .00046 .93653 | .00068 .93656 | .00091 .93661 | .00114 .93665 | .00137 .93673 | .00159 .93681 | .00182 .93690 | .00204 .93701 | .00226 .93712 |
| .20 | .00000 .87425 | .00009 .87430 | .00017 .87444 | .000265 .87467 | .000353 .87500 | .000440 .87542 | .000526 .87592 | .000610 .87720 | .000694 .87796 | .000776 .87796 | .000856 .87789 |
| .30 | .00000 .81433 | .000190 .81448 | .000380 .81491 | .000569 .81563 | .000753 .81662 | .000935 .81769 | .001114 .81942 | .001287 .82119 | .001456 .82320 | .001618 .82543 | .001774 .82767 |
| .40 | .00000 .75761 | .000318 .75791 | .000634 .76031 | .000945 .76238 | .001251 .76500 | .001548 .76813 | .001835 .77175 | .002110 .77581 | .002373 .78027 | .002621 .78503 | .002854 .78927 |
| .50 | .00000 .70466 | .000461 .70517 | .000918 .70669 | .001366 .70919 | .001803 .71265 | .002225 .71702 | .002627 .72222 | .003089 .72819 | .003365 .73484 | .003696 .74209 | .003993 .74984 |
| .60 | .00000 .65577 | .000610 .65651 | .001213 .65872 | .001804 .66238 | .002377 .66742 | .002925 .67377 | .003445 .68133 | .003930 .68997 | .004377 .69558 | .004783 .70994 | .005146 .72096 |
| .70 | .00000 .61099 | .000757 .61198 | .001506 .61491 | .002238 .61975 | .002945 .62644 | .003620 .63486 | .004253 .64489 | .004839 .65636 | .005372 .66906 | .005847 .66275 | .006260 .69723 |
| .80 | .00000 .57023 | .000899 .57144 | .001787 .57505 | .002655 .58105 | .003492 .58933 | .004283 .59980 | .005033 .61230 | .005717 .62661 | .006331 .64248 | .006868 .65959 | .007324 .67758 |
| .90 | .00000 .533326 | .001030 .53467 | .002050 .53891 | .003046 .54594 | .004007 .55571 | .004920 .56811 | .005773 .58238 | .006551 .60008 | .007243 .61910 | .007833 .63962 | .008333 .65117 |
| 1.00 | .00000 .49978 | .001151 .50137 | .002291 .51409 | .003407 .50614 | .004465 .52518 | .005510 .53934 | .006467 .55644 | .007337 .57622 | .008105 .59632 | .008757 .62223 | .009283 .54732 |

$U/K + IV/K'$
 -1
 $J+IV = SN - (A+19)$

K=SIN 86

| | | A=0.00 | A=.10 | A=.20 | A=.30 | A=.40 | A=.50 | A=.60 | A=.70 | A=.80 | A=.90 | A=1.00 |
|------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| .10 | .000000 | .00021 | .00042 | .00063 | .00083 | .00104 | .00125 | .00146 | .00166 | .00187 | .00207 | |
| | .93653 | .93654 | .93655 | .93656 | .93663 | .93667 | .93675 | .93683 | .93693 | .93703 | .93715 | |
| .20 | .000000 | .00061 | .00162 | .00243 | .00323 | .00402 | .00481 | .00558 | .00636 | .00709 | .00783 | |
| | .87430 | .87434 | .87446 | .87472 | .87505 | .87540 | .87537 | .87657 | .87724 | .87801 | .87894 | |
| .30 | .000000 | .00174 | .00347 | .00519 | .00689 | .00855 | .01010 | .01177 | .01331 | .01479 | .01622 | |
| | .81440 | .81454 | .81498 | .81569 | .81669 | .81796 | .81948 | .82126 | .82346 | .82550 | .82793 | |
| .89 | .000000 | .00291 | .00579 | .01164 | .01143 | .01415 | .01677 | .01929 | .02169 | .02396 | .02609 | |
| | .75770 | .75800 | .75890 | .76040 | .76246 | .76508 | .76822 | .77183 | .77589 | .78035 | .78516 | |
| .50 | .000000 | .00421 | .00839 | .01249 | .01649 | .02034 | .02402 | .02750 | .03077 | .03379 | .03656 | |
| | .70476 | .70526 | .70568 | .70929 | .71275 | .71711 | .72231 | .72828 | .73494 | .74216 | .74993 | |
| .60 | .000000 | .00557 | .01109 | .01649 | .02173 | .02675 | .03149 | .03593 | .04002 | .04373 | .04704 | |
| | .65587 | .65662 | .65883 | .66249 | .66753 | .67383 | .68143 | .69007 | .69966 | .71005 | .72106 | |
| .70 | .000000 | .00692 | .01377 | .02047 | .02693 | .03307 | .03889 | .04425 | .04911 | .05345 | .05723 | |
| | .61111 | .61209 | .61502 | .61987 | .62655 | .63490 | .64501 | .65647 | .66917 | .68288 | .69734 | |
| .80 | .000000 | .00822 | .01634 | .02428 | .03193 | .03921 | .04602 | .05227 | .05780 | .06279 | .06696 | |
| | .57035 | .57156 | .57516 | .58117 | .58945 | .59992 | .61242 | .62674 | .64261 | .65971 | .67771 | |
| .90 | .000000 | .00942 | .01874 | .02785 | .03664 | .04491 | .05276 | .05990 | .06652 | .07167 | .07618 | |
| | .53338 | .53479 | .53903 | .54607 | .55583 | .56824 | .58311 | .60022 | .61924 | .63976 | .66131 | |
| 1.00 | .000000 | .01053 | .02095 | .03115 | .04101 | .05033 | .05913 | .06709 | .07411 | .08007 | .08489 | |
| | .49990 | .50149 | .50627 | .51121 | .52531 | .53396 | .55658 | .57637 | .59847 | .6237 | .64747 | |

$U/K+IV/K'$
 $V+IV=SN^{-1}(A+B)$

K=SIN E9

| $1/B$ | $A=0.00$ | $A=+1.0$ | $A=-2.0$ | $A=+3.0$ | $A=-4.0$ | $A=+5.0$ | $A=-6.0$ | $A=+7.0$ | $A=-8.0$ | $A=+9.0$ | $A=-10.0$ |
|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .10 | .00000 .93654 | .00016 .93655 | .00036 .93657 | .00055 .93660 | .00073 .93664 | .00091 .93670 | .00109 .93677 | .00127 .93685 | .00145 .93694 | .00163 .93705 | .00180 .93716 |
| .20 | .00000 .87432 | .00071 .87437 | .00141 .87451 | .00212 .87475 | .00281 .87507 | .00351 .87543 | .00419 .87600 | .0046 .87654 | .00533 .87727 | .00619 .87803 | .00683 .87887 |
| .30 | .00000 .81444 | .0152 .81458 | .00303 .81502 | .00453 .81573 | .00601 .81673 | .00745 .81801 | .00888 .81952 | .01026 .82130 | .01161 .82331 | .01290 .82553 | .01415 .82797 |
| .40 | .00000 .75775 | .00254 .75805 | .00505 .75895 | .00754 .76045 | .00997 .76251 | .01234 .76513 | .01463 .76826 | .01683 .77188 | .01892 .77594 | .02090 .78040 | .02276 .78521 |
| .50 | .00000 .70481 | .0367 .70532 | .00732 .70604 | .01090 .70935 | .01438 .71291 | .01774 .71717 | .02095 .72237 | .02399 .72834 | .02684 .73499 | .02947 .74224 | .03169 .74998 |
| .60 | .00000 .65594 | .00486 .65659 | .00968 .65890 | .01435 .66255 | .01896 .66759 | .02533 .67194 | .02747 .68150 | .03134 .69014 | .03491 .69913 | .03814 .71011 | .04104 .72112 |
| .70 | .00000 .61118 | .00604 .61216 | .01201 .61509 | .01785 .61994 | .02349 .62662 | .02987 .63505 | .03342 .64508 | .03860 .65654 | .04284 .66924 | .04663 .68295 | .04992 .69741 |
| .80 | .00000 .57042 | .00717 .57163 | .01425 .57525 | .02118 .58124 | .02746 .58953 | .03421 .60500 | .04015 .61250 | .04560 .62681 | .05049 .64288 | .05478 .65979 | .05841 .67778 |
| .90 | .00000 .53345 | .03622 .53487 | .01635 .53911 | .02430 .54514 | .03197 .55591 | .03925 .56A31 | .04605 .58319 | .05225 .60030 | .05777 .61932 | .06252 .63984 | .06646 .66139 |
| .00 | .00000 .49998 | .00919 .50157 | .01026 .50634 | .02716 .51429 | .03570 .52538 | .04392 .53955 | .05159 .55566 | .05853 .57645 | .06465 .59855 | .06985 .62246 | .07404 .64755 |

$$U + IV = S_1, \quad (14+18)$$

X-SIM 5

| | | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|
| .00 | .00000 | .07307 1.00000 | .14713 1.00000 | .22352 1.00000 | .30305 1.00000 | .36840 1.00000 | .40279 1.00000 | .59312 1.00000 | .73979 1.00000 | .00000 .93325 | .00000 .85941 |
| .10 | .99997 | .07307 .99968 | .14713 .99971 | .22331 .99946 | .30305 .99908 | .36839 .99851 | .40276 .99753 | .59304 .99516 | .73944 .99516 | .97718 .93266 | .98698 .85935 |
| .20 | .99994 | .07307 .99975 | .14713 .99943 | .22331 .99909 | .30303 .99817 | .36835 .99702 | .40266 .99507 | .59200 .99036 | .73844 .93106 | .95543 .85916 | .97400 .85916 |
| .30 | .99991 | .07307 .99963 | .14713 .99914 | .22330 .99830 | .30300 .99726 | .36828 .99554 | .40250 .99261 | .59240 .98564 | .73674 .92875 | .92732 .85890 | .96109 .85890 |
| .40 | .99988 | .07307 .99951 | .14712 .99865 | .22328 .99784 | .30296 .99634 | .36818 .99405 | .40226 .99016 | .59184 .98102 | .73446 .92605 | .91695 .85852 | .94429 .85852 |
| .50 | .99985 | .07307 .99938 | .14712 .99856 | .22326 .99730 | .30290 .99543 | .36806 .99257 | .40200 .98773 | .59113 .97654 | .73165 .92316 | .90012 .85603 | .93562 .85603 |
| .60 | .99982 | .07306 .99926 | .14711 .99826 | .22324 .99676 | .30284 .99452 | .36790 .99109 | .40165 .98531 | .59026 .97220 | .72837 .92025 | .84662 .85747 | .92311 .85747 |
| .70 | .99979 | .07306 .99914 | .14710 .99799 | .22321 .99623 | .30276 .99361 | .36773 .98952 | .40125 .98291 | .58925 .96002 | .72468 .91734 | .67023 .85682 | .91076 .85682 |
| .80 | .99976 | .07306 .99902 | .14709 .99770 | .22317 .99569 | .30267 .99270 | .36752 .98816 | .40070 .98054 | .58009 .96400 | .72064 .91449 | .65676 .85611 | .89365 .85611 |
| .90 | .99973 | .07306 .99889 | .14706 .99742 | .22313 .99515 | .30257 .99179 | .36726 .98669 | .40025 .97819 | .58679 .96015 | .64406 .91172 | .88672 .85534 | .88672 .85534 |
| 1.00 | .99970 | .07306 .99877 | .14707 .99713 | .22309 .99461 | .30246 .99049 | .36702 .98521 | .40002 .97586 | .58536 .95646 | .71177 .90905 | .83201 .85452 | .87501 .85452 |

$$\begin{aligned} U/K+IV/K' \\ -1 \\ U+IV=SN \quad (A+IB) \end{aligned}$$

K = SIN 10

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0.00 | .03640 | .07293 | .10971 | .14689 | .18460 | .22303 | .26235 | .30282 | .34471 | .38839 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .03640 | .07293 | .10971 | .14689 | .18460 | .22302 | .26234 | .30279 | .34467 | .38833 |
| | .99998 | .99993 | .99983 | .99970 | .99952 | .99930 | .99912 | .99868 | .99826 | .9973 |
| .20 | .03640 | .07293 | .10971 | .14689 | .18460 | .22299 | .26229 | .30272 | .34456 | .38816 |
| | .99996 | .99985 | .99967 | .99940 | .99905 | .99860 | .99804 | .99736 | .99653 | .99551 |
| .30 | .03640 | .07293 | .10971 | .14687 | .18456 | .22295 | .26222 | .30260 | .34438 | .38789 |
| | .99995 | .99978 | .99950 | .99910 | .99857 | .99790 | .99706 | .99604 | .99481 | .99328 |
| .40 | .03640 | .07293 | .10970 | .14685 | .18452 | .22288 | .26211 | .30244 | .34412 | .38751 |
| | .99993 | .99971 | .99933 | .99880 | .99809 | .99719 | .99608 | .99472 | .99307 | .99104 |
| .50 | .03640 | .07292 | .10969 | .14683 | .18448 | .22280 | .26198 | .30222 | .34379 | .38699 |
| | .99991 | .99963 | .99917 | .99850 | .99761 | .99649 | .99511 | .99341 | .99134 | .98882 |
| .60 | .03640 | .07292 | .10968 | .14680 | .18442 | .22270 | .26181 | .30196 | .34338 | .38639 |
| | .99989 | .99956 | .99900 | .99820 | .99714 | .99580 | .99413 | .99210 | .99063 | .98661 |
| .70 | .03640 | .07292 | .10966 | .14677 | .18436 | .22259 | .26162 | .30165 | .34291 | .38567 |
| | .99987 | .99949 | .99883 | .99790 | .99666 | .99510 | .99316 | .99079 | .98791 | .98442 |
| .80 | .03640 | .07291 | .10965 | .14673 | .18428 | .22245 | .26140 | .30129 | .34236 | .38485 |
| | .99985 | .99941 | .99867 | .99760 | .99619 | .99440 | .99219 | .98949 | .98621 | .98223 |
| .90 | .03640 | .07291 | .10963 | .14669 | .18420 | .22230 | .26114 | .30089 | .34175 | .38392 |
| | .99984 | .99934 | .99850 | .99730 | .99571 | .99370 | .99122 | .98319 | .98152 | .98007 |
| 1.00 | .03640 | .07290 | .10961 | .14664 | .18411 | .22213 | .26086 | .30045 | .34106 | .38290 |
| | .99982 | .99926 | .99833 | .99700 | .99524 | .99301 | .99026 | .98690 | .98284 | .97793 |

$U/K + IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 15

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 0.00 | .02410 1.00000 | .04840 1.00000 | .07270 1.00000 | .09712 1.00000 | .12170 1.00000 | .14648 1.00000 | .17151 1.00000 | .19684 1.00000 | .22253 1.00000 | .24865 1.00000 |
| .10 | .02410 .99999 | .04840 .99994 | .07270 .99987 | .09712 .99977 | .12169 .99964 | .14647 .99946 | .17150 .99929 | .19683 .99906 | .22251 .99879 | .24862 .99848 |
| .20 | .02410 .99997 | .04840 .99989 | .07270 .99975 | .09711 .99955 | .12168 .99929 | .14643 .99897 | .17147 .99858 | .19679 .99812 | .22245 .99758 | .24853 .99696 |
| .30 | .02410 .99996 | .04840 .99983 | .07270 .99962 | .09711 .99932 | .12167 .99893 | .14643 .99845 | .17143 .99786 | .19672 .99717 | .22235 .99637 | .24839 .99544 |
| .40 | .02410 .99994 | .04840 .99978 | .07269 .99949 | .09706 .99910 | .12165 .99058 | .14639 .99703 | .17137 .99715 | .19662 .99624 | .22221 .99516 | .24819 .99393 |
| .50 | .02410 .99993 | .04840 .99972 | .07269 .99937 | .09706 .99887 | .12162 .99822 | .14634 .99742 | .17128 .99644 | .19650 .99530 | .22203 .99396 | .24793 .99242 |
| .60 | .02410 .99992 | .04840 .99966 | .07268 .99924 | .09706 .9964 | .12158 .99787 | .14628 .99690 | .17119 .99574 | .19635 .99436 | .22181 .99276 | .24761 .99091 |
| .70 | .02410 .99990 | .04839 .99961 | .07267 .99911 | .09704 .99842 | .12154 .99751 | .14621 .99638 | .17107 .99505 | .19617 .99343 | .22155 .99156 | .24724 .98942 |
| .80 | .02410 .99989 | .04839 .99955 | .07266 .99899 | .09702 .99819 | .12150 .99716 | .14612 .99587 | .17094 .99432 | .19596 .99250 | .22125 .99037 | .24682 .98793 |
| .90 | .02410 .99987 | .04839 .99950 | .07265 .99886 | .09699 .99797 | .12144 .99680 | .14603 .99536 | .17078 .99362 | .19573 .99157 | .22091 .98919 | .24634 .98645 |
| 1.00 | .02410 .99986 | .04838 .99944 | .07264 .99874 | .09696 .99774 | .12138 .99645 | .14593 .99484 | .17061 .99292 | .19547 .99064 | .22053 .98801 | .24580 .98498 |

U/K+IV/K'
-1
U+IV=SN (A+TB)

K=SIN 20

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0.00 | .01005 | .03612 | .05422 | .07236 | .09060 | .10892 | .12734 | .14589 | .16459 | .18346 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .01805 | .03612 | .05422 | .07236 | .09060 | .10891 | .12733 | .14588 | .16458 | .18344 |
| | .99999 | .99995 | .99989 | .99981 | .99970 | .99957 | .99941 | .99923 | .99902 | .99877 |
| .20 | .01805 | .03612 | .05422 | .07237 | .09059 | .10890 | .12731 | .14585 | .16453 | .18339 |
| | .99998 | .99991 | .99979 | .99962 | .99941 | .99914 | .99883 | .99846 | .99803 | .99755 |
| .30 | .01805 | .03612 | .05422 | .07237 | .09058 | .10893 | .12728 | .14580 | .16446 | .18329 |
| | .99996 | .99986 | .99968 | .99946 | .99911 | .99872 | .99824 | .99769 | .99705 | .99632 |
| .40 | .01805 | .03612 | .05421 | .07236 | .09056 | .10887 | .12724 | .14573 | .16436 | .18315 |
| | .99995 | .99981 | .99958 | .99935 | .99882 | .99824 | .99766 | .99692 | .99667 | .99510 |
| .50 | .01805 | .03612 | .05421 | .07235 | .09054 | .10882 | .12718 | .14564 | .16424 | .18297 |
| | .99994 | .99977 | .99947 | .99906 | .99852 | .99786 | .99707 | .99615 | .99509 | .99388 |
| .60 | .01805 | .03611 | .05420 | .07233 | .09052 | .10877 | .12711 | .14554 | .16408 | .18275 |
| | .99993 | .99972 | .99937 | .99887 | .99823 | .99744 | .99649 | .99539 | .99411 | .99267 |
| .70 | .01805 | .03611 | .05420 | .07232 | .09049 | .10872 | .12702 | .14541 | .16390 | .18249 |
| | .99992 | .99967 | .99926 | .99868 | .99793 | .99701 | .99591 | .99462 | .99314 | .99146 |
| .80 | .01805 | .03611 | .05419 | .07230 | .09045 | .10866 | .12692 | .14526 | .16368 | .18220 |
| | .99991 | .99963 | .99916 | .99850 | .99754 | .99659 | .99533 | .99386 | .99217 | .95026 |
| .90 | .01805 | .03611 | .05418 | .07228 | .09042 | .10859 | .12682 | .14510 | .16344 | .18186 |
| | .99989 | .99958 | .99905 | .99831 | .99735 | .99615 | .99475 | .99310 | .99121 | .98906 |
| 1.00 | .01805 | .03610 | .05417 | .07226 | .09037 | .10851 | .12669 | .14491 | .16318 | .18149 |
| | .99988 | .99953 | .99895 | .99812 | .99705 | .99574 | .99417 | .99234 | .99025 | .98787 |

$U/K+IV/R^*$
 -1
 $U+IV=SK \quad (A+IB)$

K=SIN 25

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 0.00 | .01435 1.00000 | .02871 1.00000 | .04309 1.00000 | .05750 1.00000 | .07195 1.00000 | .08644 1.00000 | .10099 1.00000 | .11562 1.00000 | .13032 1.00000 | .14511 1.00000 |
| .10 | .01435 .99999 | .02871 .99996 | .04309 .99991 | .05750 .99984 | .07194 .99974 | .08644 .99963 | .10099 .99949 | .11561 .99933 | .13031 .99915 | .14510 .99894 |
| .20 | .01435 .99998 | .02871 .99992 | .04309 .99981 | .05750 .99967 | .07194 .99946 | .08643 .99925 | .10097 .99896 | .11559 .99866 | .13027 .99829 | .14505 .99788 |
| .30 | .01435 .99997 | .02871 .99988 | .04309 .99972 | .05749 .99951 | .07193 .99923 | .08641 .99868 | .10095 .99847 | .11555 .99799 | .13022 .99744 | .14497 .99652 |
| .40 | .01435 .99996 | .02871 .99984 | .04308 .99963 | .05748 .99934 | .07192 .99907 | .08639 .99851 | .10091 .99796 | .11549 .99732 | .13021 .99659 | .14487 .99577 |
| .50 | .01435 .99995 | .02871 .99979 | .04308 .99954 | .05748 .99918 | .07190 .99871 | .08636 .99813 | .10087 .99745 | .11542 .99665 | .13004 .99574 | .14473 .99471 |
| .60 | .01435 .99994 | .02871 .99975 | .04308 .99945 | .05747 .99901 | .07188 .99845 | .08623 .99776 | .10081 .99694 | .11534 .99599 | .12992 .99490 | .14456 .99376 |
| .70 | .01435 .99993 | .02871 .99971 | .04307 .99935 | .05745 .99885 | .07185 .99819 | .08628 .99739 | .10074 .99644 | .11524 .99532 | .12970 .99405 | .14436 .99262 |
| .80 | .01435 .99992 | .02870 .99967 | .04307 .99926 | .05744 .99868 | .07183 .99794 | .08626 .99702 | .10067 .99513 | .11513 .99466 | .12962 .99321 | .14414 .99156 |
| .90 | .01435 .99991 | .02870 .99963 | .04306 .99917 | .05742 .99852 | .07180 .99768 | .08618 .99665 | .10058 .99542 | .11500 .99400 | .12943 .99238 | .14388 .99054 |
| 1.00 | .01435 .99990 | .02870 .99959 | .04305 .99908 | .05741 .99835 | .07176 .99742 | .08612 .99623 | .10049 .99492 | .11485 .99334 | .12822 .99154 | .14359 .99051 |

$U/K + IV/K$
 -1
 $U+IV=SN \quad (A \wedge IB)$

K=SIN 30

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0.00 | .01187 | .02374 | .03562 | .04752 | .05944 | .07140 | .08339 | .09543 | .10751 | .11965 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .01187 | .02374 | .03562 | .04752 | .05944 | .07140 | .08339 | .09542 | .10750 | .11964 |
| | .99999 | .99996 | .99992 | .99985 | .99977 | .99966 | .99954 | .99940 | .99923 | .99905 |
| .20 | .01187 | .02374 | .03562 | .04752 | .05944 | .07139 | .08337 | .09540 | .10747 | .11960 |
| | .99998 | .99993 | .99983 | .99970 | .99953 | .99933 | .99908 | .99879 | .99847 | .99810 |
| .30 | .01187 | .02374 | .03562 | .04751 | .05943 | .07138 | .08335 | .09537 | .10743 | .11954 |
| | .99997 | .99989 | .99975 | .99955 | .99930 | .99909 | .99862 | .99819 | .99770 | .99715 |
| .40 | .01186 | .02373 | .03561 | .04751 | .05942 | .07136 | .08332 | .09532 | .10736 | .11945 |
| | .99996 | .99935 | .99967 | .99940 | .99907 | .99865 | .99816 | .99759 | .99694 | .99620 |
| .50 | .01186 | .02373 | .03561 | .04750 | .05941 | .07133 | .08329 | .09527 | .10728 | .11934 |
| | .99995 | .99981 | .99958 | .99926 | .99863 | .99832 | .99770 | .99699 | .99617 | .99526 |
| .60 | .01186 | .02373 | .03561 | .04749 | .05939 | .07131 | .08324 | .09520 | .10719 | .11920 |
| | .99994 | .99976 | .99950 | .99911 | .99860 | .99798 | .99724 | .99639 | .99551 | .99431 |
| .70 | .01186 | .02373 | .03560 | .04748 | .05937 | .07127 | .08319 | .09512 | .10707 | .11904 |
| | .99994 | .99974 | .99941 | .99896 | .99837 | .99765 | .99679 | .99579 | .99465 | .99338 |
| .80 | .01186 | .02373 | .03560 | .04747 | .05935 | .07123 | .08313 | .09503 | .10694 | .11885 |
| | .99993 | .99970 | .99933 | .99861 | .99814 | .99771 | .99633 | .99519 | .99390 | .99244 |
| .90 | .01186 | .02373 | .03559 | .04746 | .05932 | .07119 | .08305 | .09492 | .10676 | .11865 |
| | .99992 | .99967 | .99925 | .99866 | .99790 | .99698 | .99560 | .99460 | .99315 | .99151 |
| 1.00 | .01186 | .02373 | .03559 | .04744 | .05930 | .07114 | .08298 | .09480 | .10662 | .12841 |
| | .99991 | .99963 | .99916 | .99851 | .99767 | .99664 | .99542 | .99451 | .99240 | .99059 |

$U/K + IV/K^*$
 -1
 $U+IV = SN \quad (A - B)$

K=SIN 35

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| .00 | .01007 | .02015 | .03023 | .04033 | .05044 | .06057 | .07073 | .08091 | .09109 | .10139 |
| | .99999 | .99999 | .99999 | .99999 | .99999 | .99999 | .99999 | .99999 | .99999 | .99999 |
| .10 | .91057 | .02015 | .03023 | .04032 | .05044 | .06057 | .07072 | .08091 | .09113 | .10136 |
| | .99999 | .99997 | .99992 | .99986 | .99978 | .99969 | .99958 | .99944 | .99929 | .99913 |
| .20 | .01007 | .02015 | .03023 | .04032 | .05043 | .06056 | .07071 | .08089 | .09110 | .10135 |
| | .99998 | .99993 | .99985 | .99972 | .99957 | .99938 | .99915 | .99909 | .99959 | .99025 |
| .30 | .01007 | .02015 | .03023 | .04032 | .05043 | .06055 | .07070 | .08087 | .09107 | .10130 |
| | .99997 | .99990 | .99977 | .99959 | .99935 | .99907 | .99873 | .99833 | .99800 | .9973 |
| .40 | .01007 | .02015 | .03023 | .04032 | .05042 | .06053 | .07067 | .08083 | .09101 | .10122 |
| | .99997 | .99986 | .99959 | .99945 | .99914 | .99876 | .99831 | .99777 | .99718 | .99651 |
| .50 | .01007 | .02014 | .03022 | .04031 | .05041 | .06051 | .07064 | .08078 | .09094 | .10113 |
| | .99996 | .99983 | .99961 | .99931 | .99902 | .99845 | .99788 | .99723 | .99648 | .99564 |
| .60 | .01007 | .02014 | .03022 | .04030 | .05039 | .06049 | .07060 | .08072 | .09085 | .10102 |
| | .99995 | .99979 | .99954 | .99925 | .99871 | .99811 | .99745 | .99667 | .99578 | .99477 |
| .70 | .01007 | .02014 | .03022 | .04029 | .05038 | .06046 | .07056 | .08066 | .09076 | .10088 |
| | .99994 | .99976 | .99946 | .99904 | .99849 | .99783 | .99714 | .99612 | .99538 | .99391 |
| .80 | .01007 | .02014 | .03021 | .04028 | .05036 | .06043 | .07050 | .08058 | .09065 | .10073 |
| | .99993 | .99973 | .99938 | .99890 | .99828 | .99752 | .99662 | .99551 | .99439 | .99305 |
| .90 | .01007 | .02014 | .03021 | .04027 | .05033 | .06039 | .07044 | .08049 | .09052 | .10055 |
| | .99992 | .99969 | .99931 | .99876 | .99807 | .99721 | .99620 | .99503 | .99365 | .99220 |
| 1.00 | .01007 | .02014 | .03020 | .04026 | .05031 | .06035 | .07038 | .08039 | .09038 | .10035 |
| | .99991 | .99966 | .99923 | .99863 | .99785 | .99690 | .99578 | .99448 | .99300 | .99135 |

$U/K+IV/k^*$
 -1
 $U+IV=SN \quad (A+TB)$

| K=SIN 40 | | | | | | | | | |
|----------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 |
| 0.00 | .00871 1.00000 | .01742 1.00000 | .02613 1.00000 | .03486 1.00000 | .04360 1.00000 | .05235 1.00000 | .06112 1.00000 | .06991 1.00000 | .07873 1.00000 |
| .10 | .00871 .99999 | .01742 .99997 | .02613 .99993 | .03486 .99987 | .04360 .99980 | .05235 .99971 | .06112 .99965 | .06991 .99948 | .07872 .99934 |
| .20 | .00871 .99998 | .01742 .99994 | .02613 .9996 | .03486 .99974 | .04360 .99960 | .05235 .99942 | .06111 .99921 | .06990 .99896 | .07870 .99868 |
| .30 | .00871 .99998 | .01742 .99990 | .02613 .99978 | .03485 .99961 | .04359 .99939 | .05233 .99913 | .06109 .99881 | .06987 .99844 | .07867 .99802 |
| .40 | .00871 .99997 | .01742 .99987 | .02613 .99971 | .03485 .99948 | .04358 .99919 | .05232 .99884 | .06107 .99841 | .06984 .99792 | .07862 .99736 |
| .50 | .00871 .99996 | .01742 .99984 | .02613 .99964 | .03485 .99936 | .04357 .99999 | .05230 .99885 | .06105 .99802 | .06980 .99740 | .07856 .99671 |
| .60 | .00871 .99995 | .01742 .99981 | .02613 .99957 | .03484 .99923 | .04356 .99879 | .05228 .99826 | .06101 .99762 | .06969 .99689 | .07849 .99605 |
| .70 | .00871 .99994 | .01741 .99977 | .02612 .99949 | .03483 .99910 | .04354 .99859 | .05226 .99797 | .06097 .99723 | .06969 .99637 | .07841 .99540 |
| .80 | .00871 .99994 | .01741 .99974 | .02612 .99942 | .03482 .99939 | .04353 .99768 | .05223 .99683 | .06093 .99536 | .06962 .99475 | .07831 .99350 |
| .90 | .00871 .99995 | .01741 .99971 | .02612 .99935 | .03481 .99884 | .04351 .99619 | .05220 .99739 | .06087 .99644 | .06954 .99534 | .07820 .99410 |
| 1.00 | .00871 .99992 | .01741 .99958 | .02611 .99928 | .03480 .99871 | .04349 .99799 | .05216 .99710 | .06062 .99605 | .06946 .99483 | .07808 .99345 |

$U/K + JV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 45

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0.00 | .00763 | .01526 | .02289 | .03052 | .03819 | .04585 | .05352 | .06122 | .06893 | .07666 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .00763 | .01526 | .02289 | .03053 | .03816 | .04585 | .05352 | .06121 | .06892 | .07665 |
| | .99999 | .99997 | .99993 | .99986 | .99981 | .99972 | .99962 | .99951 | .99937 | .99923 |
| .20 | .00763 | .01526 | .02289 | .03053 | .03818 | .04584 | .05351 | .06120 | .06891 | .07663 |
| | .99998 | .99994 | .99986 | .99976 | .99962 | .99945 | .99925 | .99901 | .99875 | .99845 |
| .30 | .00763 | .01526 | .02289 | .03053 | .03818 | .04583 | .05350 | .06118 | .06888 | .07659 |
| | .99996 | .99991 | .99979 | .99963 | .99943 | .99917 | .99887 | .99852 | .99813 | .99768 |
| .40 | .00763 | .01526 | .02289 | .03053 | .03817 | .04582 | .05346 | .06115 | .06884 | .07654 |
| | .99997 | .99988 | .99973 | .99951 | .99923 | .99890 | .99850 | .99803 | .99750 | .99691 |
| .50 | .00763 | .01526 | .02289 | .03052 | .03816 | .04581 | .05346 | .06112 | .06879 | .07646 |
| | .99996 | .99985 | .99966 | .99939 | .99904 | .99862 | .99812 | .99754 | .99688 | .99614 |
| .60 | .00763 | .01526 | .02289 | .03052 | .03815 | .04579 | .05343 | .06107 | .06872 | .07638 |
| | .99995 | .99982 | .99959 | .99927 | .99885 | .99835 | .99774 | .99705 | .99626 | .99537 |
| .70 | .00763 | .01526 | .02288 | .03051 | .03814 | .04577 | .05339 | .06102 | .06865 | .07628 |
| | .99995 | .99979 | .99952 | .99914 | .99886 | .99807 | .99737 | .99656 | .99564 | .99461 |
| .80 | .00763 | .01525 | .02288 | .03050 | .03812 | .04574 | .05335 | .06096 | .06857 | .07616 |
| | .99994 | .99976 | .99945 | .99902 | .99847 | .99780 | .99700 | .99607 | .99502 | .99385 |
| .90 | .00763 | .01525 | .02288 | .03050 | .03811 | .04571 | .05331 | .06090 | .06847 | .07603 |
| | .99993 | .99973 | .99938 | .99900 | .99828 | .99752 | .99662 | .99559 | .99441 | .99309 |
| 1.00 | .00763 | .01525 | .02287 | .03049 | .03809 | .04568 | .05326 | .06082 | .06836 | .07586 |
| | .99992 | .99969 | .99931 | .99876 | .99809 | .99725 | .99625 | .99510 | .99380 | .99234 |

$\frac{U}{K} + \frac{IV}{V} - \frac{I}{K}$
 $U+IV=SN$ $(A+IB)$

K=SIN 50

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 0.00 | .00674 1.00000 | .01349 1.00000 | .02024 1.00000 | .02700 1.00000 | .03376 1.00000 | .04053 1.00000 | .04731 1.00000 | .05411 1.00000 | .06092 1.00000 | .06775 1.00000 |
| .10 | .00674 .99999 | .01349 .99997 | .02024 .99993 | .02700 .99988 | .03376 .99982 | .04053 .99974 | .04731 .99964 | .05411 .99953 | .06092 .99940 | .06774 .99926 |
| .20 | .00674 .99999 | .01349 .99994 | .02024 .99987 | .02699 .99977 | .03376 .99963 | .04053 .99947 | .04731 .99928 | .05410 .99906 | .06090 .99880 | .06772 .99852 |
| .30 | .00674 .99998 | .01349 .99991 | .02024 .99990 | .02699 .99965 | .03375 .99945 | .04052 .99921 | .04729 .99892 | .05408 .99859 | .06088 .99821 | .06769 .99778 |
| .40 | .00674 .99997 | .01349 .99986 | .02024 .99974 | .02699 .99953 | .03375 .99937 | .04051 .99894 | .04728 .99856 | .05405 .99812 | .06084 .99761 | .06764 .99704 |
| .50 | .00674 .99996 | .01349 .99985 | .02024 .99967 | .02699 .99941 | .03374 .99908 | .04049 .99868 | .04726 .99820 | .05402 .99765 | .06080 .99701 | .06758 .99631 |
| .60 | .00674 .99995 | .01349 .99982 | .02023 .99961 | .02698 .99930 | .03373 .99890 | .04048 .99842 | .04723 .99784 | .05398 .99718 | .06074 .99642 | .06750 .99557 |
| .70 | .00674 .99995 | .01349 .99980 | .02023 .99954 | .02698 .99918 | .03372 .99872 | .04046 .99815 | .04720 .99746 | .05394 .99671 | .06068 .99583 | .06741 .99484 |
| .80 | .00674 .99994 | .01349 .99977 | .02023 .99947 | .02697 .99906 | .03371 .99854 | .04044 .99789 | .04716 .99713 | .05389 .99624 | .06060 .99524 | .06731 .99411 |
| .90 | .00674 .99993 | .01349 .99974 | .02023 .99941 | .02696 .99895 | .03369 .99835 | .04041 .99763 | .04713 .99677 | .05363 .99578 | .06052 .99465 | .06719 .99339 |
| 1.00 | .00674 .99993 | .01349 .99971 | .02022 .99934 | .02695 .99883 | .03367 .99817 | .04038 .99737 | .04708 .99641 | .05376 .99531 | .06042 .99407 | .06706 .99267 |

$U/K + IV/K'$
 -1
 $U + IV = SN \quad (A+IB)$

K=SIN 55

| B | 1/A= .01 | 1/A= .02 | 1/A= .03 | 1/A= .04 | 1/A= .05 | 1/A= .06 | 1/A= .07 | 1/A= .08 | 1/A= .09 | 1/A= .10 |
|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.00 | .00500 | .01200 | .01301 | .02401 | .03003 | .03605 | .04208 | .04813 | .05418 | .06025 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .00600 | .01200 | .01801 | .02401 | .03003 | .03605 | .04208 | .04812 | .05418 | .06024 |
| | .99999 | .99997 | .99994 | .99989 | .99982 | .99975 | .99965 | .99955 | .99942 | .99929 |
| .20 | .00600 | .01200 | .01801 | .02401 | .03003 | .03605 | .04208 | .04811 | .05416 | .06022 |
| | .99999 | .99994 | .99987 | .99977 | .99965 | .99949 | .99930 | .99909 | .99885 | .99857 |
| .30 | .00600 | .01200 | .01800 | .02401 | .03002 | .03604 | .04207 | .04810 | .05414 | .06019 |
| | .99998 | .99992 | .99981 | .99966 | .99947 | .99924 | .99898 | .99864 | .99827 | .99786 |
| .40 | .00600 | .01200 | .01800 | .02401 | .03002 | .03603 | .04205 | .04808 | .05411 | .06015 |
| | .99997 | .99989 | .99975 | .99955 | .99929 | .99894 | .99861 | .99818 | .99770 | .99715 |
| .50 | .00600 | .01200 | .01803 | .02401 | .03001 | .03602 | .04203 | .04805 | .05407 | .06009 |
| | .99996 | .99986 | .99968 | .99943 | .99912 | .99871 | .99826 | .99773 | .99712 | .99644 |
| .60 | .00600 | .01200 | .01800 | .02400 | .03000 | .03601 | .04201 | .04801 | .05402 | .06003 |
| | .99996 | .99983 | .99962 | .99932 | .99894 | .99847 | .99792 | .99728 | .99655 | .99573 |
| .70 | .00600 | .01200 | .01800 | .02400 | .02999 | .03599 | .04198 | .04797 | .05396 | .05995 |
| | .99995 | .99980 | .99956 | .99921 | .99876 | .99822 | .99757 | .99683 | .99598 | .99503 |
| .80 | .00600 | .01200 | .01800 | .02399 | .02998 | .03597 | .04195 | .04793 | .05390 | .05986 |
| | .99994 | .99977 | .99949 | .99910 | .99859 | .99796 | .99723 | .99638 | .99541 | .99433 |
| .90 | .00600 | .01200 | .01799 | .02398 | .02997 | .03595 | .04192 | .04787 | .05382 | .05975 |
| | .99994 | .99975 | .99943 | .99898 | .99841 | .99771 | .99688 | .99593 | .99484 | .99363 |
| 1.00 | .00600 | .01200 | .01799 | .02398 | .02995 | .03592 | .04188 | .04782 | .05374 | .05964 |
| | .99993 | .99972 | .99937 | .99887 | .99824 | .99746 | .99654 | .99548 | .99428 | .99293 |

$U/K + IV/K'$
 -1
 $J+IV=SN$ (A+18)

K=SIN E0

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0.00 | .00535 | .01071 | .01607 | .02143 | .02680 | .03217 | .03755 | .04294 | .04834 | .05375 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .00535 | .01071 | .01607 | .02143 | .02680 | .03217 | .03755 | .04294 | .04834 | .05375 |
| | .99999 | .99997 | .99994 | .99989 | .99983 | .99975 | .99966 | .99956 | .99944 | .99931 |
| .20 | .00535 | .01071 | .01607 | .02143 | .02680 | .03217 | .03755 | .04293 | .04833 | .05373 |
| | .99999 | .99995 | .99988 | .99978 | .99966 | .99950 | .99932 | .99912 | .99888 | .99861 |
| .30 | .00535 | .01071 | .01607 | .02143 | .02679 | .03216 | .03754 | .04292 | .04831 | .05371 |
| | .99998 | .99992 | .99981 | .99967 | .99948 | .99926 | .99899 | .99868 | .99832 | .99792 |
| .40 | .00535 | .01071 | .01607 | .02143 | .02679 | .03215 | .03752 | .04290 | .04826 | .05367 |
| | .99997 | .99989 | .99975 | .99955 | .99931 | .99901 | .99865 | .99824 | .99776 | .99723 |
| .50 | .00535 | .01071 | .01607 | .02142 | .02678 | .03214 | .03751 | .04287 | .04824 | .05362 |
| | .99997 | .99986 | .99969 | .99945 | .99914 | .99876 | .99831 | .99780 | .99721 | .99654 |
| .60 | .00535 | .01071 | .01606 | .02142 | .02677 | .03213 | .03749 | .04284 | .04820 | .05356 |
| | .99986 | .99954 | .99933 | .99934 | .99897 | .99852 | .99798 | .99736 | .99665 | .99586 |
| .70 | .00535 | .01071 | .01606 | .02141 | .02677 | .03211 | .03746 | .04281 | .04815 | .05349 |
| | .99995 | .99981 | .99957 | .99923 | .99880 | .99827 | .99754 | .99692 | .99609 | .99517 |
| .80 | .00535 | .01071 | .01606 | .02141 | .02676 | .03210 | .03743 | .04277 | .04809 | .05341 |
| | .99995 | .99976 | .99951 | .99912 | .99863 | .99802 | .99731 | .99668 | .99554 | .99449 |
| .90 | .00535 | .01071 | .01606 | .02140 | .02674 | .03208 | .03740 | .04272 | .04802 | .05331 |
| | .99994 | .99975 | .99944 | .99901 | .99846 | .99778 | .99697 | .99605 | .99499 | .99381 |
| 1.00 | .00535 | .01071 | .01605 | .02140 | .02673 | .03205 | .03737 | .04267 | .04795 | .05321 |
| | .99993 | .99973 | .99936 | .99900 | .99829 | .99753 | .99664 | .99561 | .99446 | .99314 |

$U/K+IV/K'$
 -1
 $U+IV=SN \quad (\Lambda+\{B\})$

K=SIN 65

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 6.00 | .00476 | .00956 | .01434 | .01913 | .02392 | .02871 | .03351 | .03832 | .04314 | .04797 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .00476 | .00956 | .01434 | .01913 | .02392 | .02871 | .03351 | .03832 | .04314 | .04796 |
| | .99999 | .99997 | .99994 | .99993 | .99993 | .99996 | .99967 | .99957 | .99945 | .99932 |
| .20 | .00476 | .00956 | .01434 | .01913 | .02391 | .02871 | .03351 | .03831 | .04313 | .04795 |
| | .99999 | .99995 | .99995 | .99998 | .99979 | .99966 | .99952 | .99934 | .99914 | .99891 |
| .30 | .00476 | .00956 | .01434 | .01912 | .02391 | .02870 | .03350 | .03830 | .04311 | .04792 |
| | .99996 | .99992 | .99992 | .99968 | .99950 | .99927 | .99901 | .99871 | .99836 | .99797 |
| .40 | .00476 | .00956 | .01434 | .01912 | .02391 | .02870 | .03349 | .03828 | .04308 | .04789 |
| | .99997 | .99989 | .99976 | .99957 | .99933 | .99903 | .99868 | .99826 | .99782 | .99730 |
| .50 | .00476 | .00956 | .01434 | .01912 | .02390 | .02869 | .03347 | .03826 | .04305 | .04785 |
| | .99997 | .99987 | .99987 | .99970 | .99946 | .99916 | .99879 | .99835 | .99785 | .99727 |
| .60 | .00476 | .00956 | .01434 | .01912 | .02390 | .02868 | .03345 | .03823 | .04301 | .04779 |
| | .99996 | .99984 | .99964 | .99936 | .99909 | .99865 | .99803 | .99742 | .99673 | .99596 |
| .70 | .00476 | .00956 | .01434 | .01911 | .02389 | .02866 | .03343 | .03820 | .04297 | .04773 |
| | .99995 | .99981 | .99981 | .99956 | .99925 | .99883 | .99831 | .99770 | .99699 | .99619 |
| .80 | .00476 | .00956 | .01433 | .01911 | .02388 | .02865 | .03341 | .03816 | .04231 | .04766 |
| | .99995 | .99979 | .99952 | .99914 | .99866 | .99807 | .99737 | .99656 | .99565 | .99462 |
| .90 | .00476 | .00956 | .01433 | .01910 | .02387 | .02863 | .03336 | .03812 | .04286 | .04758 |
| | .99994 | .99976 | .9996 | .99904 | .99849 | .99783 | .99704 | .99614 | .99511 | .99396 |
| 1.00 | .00476 | .00956 | .01433 | .01910 | .02386 | .02861 | .03335 | .03808 | .04279 | .04748 |
| | .99993 | .99973 | .99940 | .99833 | .99753 | .99672 | .99571 | .99456 | .99330 | |

$U/K + IV/K'$
 -1
 $U+IV=SN \quad \{A+IB\}$

K=SIN 70

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0.00 | .00425 | .00650 | .01275 | .01701 | .02126 | .02553 | .02979 | .03407 | .03835 | .04264 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .00425 | .00650 | .01275 | .01701 | .02126 | .02553 | .02979 | .03407 | .03835 | .04264 |
| | .99999 | .99997 | .99994 | .99999 | .99984 | .99975 | .99966 | .99958 | .99946 | .99934 |
| .20 | .00425 | .00650 | .01275 | .01700 | .02126 | .02552 | .02979 | .03406 | .03834 | .04262 |
| | .99999 | .99995 | .99988 | .99979 | .99967 | .99953 | .99935 | .99915 | .99893 | .99867 |
| .30 | .00425 | .00650 | .01275 | .01700 | .02126 | .02552 | .02976 | .03405 | .03832 | .04260 |
| | .99998 | .99992 | .99982 | .99968 | .99951 | .99929 | .99903 | .99873 | .99839 | .99801 |
| .40 | .00425 | .00650 | .01275 | .01700 | .02126 | .02551 | .02977 | .03403 | .03830 | .04257 |
| | .99997 | .99999 | .99976 | .99956 | .99934 | .99905 | .99871 | .99831 | .99786 | .99735 |
| .50 | .00425 | .00650 | .01275 | .01700 | .02126 | .02550 | .02976 | .03401 | .03827 | .04253 |
| | .99997 | .99967 | .99970 | .99947 | .99926 | .99881 | .99830 | .99789 | .99732 | .99669 |
| .60 | .00425 | .00650 | .01275 | .01700 | .02124 | .02549 | .02974 | .03399 | .03824 | .04249 |
| | .99996 | .99984 | .99965 | .99937 | .99901 | .99858 | .99816 | .99747 | .99679 | .99603 |
| .70 | .00425 | .00650 | .01275 | .01699 | .02124 | .02548 | .02972 | .03396 | .03820 | .04243 |
| | .99995 | .99982 | .99959 | .99926 | .99905 | .99834 | .99774 | .99705 | .99626 | .99538 |
| .80 | .00425 | .00650 | .01274 | .01699 | .02123 | .02547 | .02970 | .03393 | .03815 | .04237 |
| | .99995 | .99979 | .99953 | .99916 | .99868 | .99811 | .99742 | .99663 | .99573 | .99472 |
| .90 | .00425 | .00650 | .01274 | .01696 | .02122 | .02545 | .02968 | .03389 | .03810 | .04229 |
| | .99994 | .99976 | .99947 | .99905 | .99852 | .99787 | .99719 | .99621 | .99520 | .99407 |
| 1.00 | .00425 | .00650 | .01274 | .01698 | .02121 | .02543 | .02965 | .03385 | .03804 | .04221 |
| | .99993 | .99974 | .99941 | .99895 | .99836 | .99763 | .99678 | .99579 | .99468 | .99343 |

$U/K + IV/K'$
 -1
 $U+IV=SN \quad (A+1B)$

K=SIN 75

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0.00 | .00374 | .00748 | .01122 | .01497 | .01872 | .02247 | .02622 | .02999 | .03376 | .03753 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .00374 | .00748 | .01122 | .01497 | .01872 | .02247 | .02622 | .02999 | .03375 | .03753 |
| | .99999 | .99997 | .99994 | .99990 | .99984 | .99977 | .99968 | .99958 | .99947 | .99937 |
| .20 | .00374 | .00748 | .01122 | .01497 | .01871 | .02247 | .02622 | .02998 | .03374 | .03752 |
| | .99999 | .99995 | .99988 | .99979 | .99968 | .99953 | .99936 | .99917 | .99896 | .99869 |
| .30 | .00374 | .00748 | .01122 | .01497 | .01871 | .02246 | .02621 | .02997 | .03373 | .03750 |
| | .99998 | .99992 | .99982 | .99969 | .99951 | .99930 | .99904 | .99875 | .99841 | .99804 |
| .40 | .00374 | .00748 | .01122 | .01496 | .01871 | .02246 | .02620 | .02996 | .03371 | .03747 |
| | .99997 | .99990 | .99977 | .99958 | .99935 | .99906 | .99872 | .99833 | .99799 | .99739 |
| .50 | .00374 | .00748 | .01122 | .01496 | .01870 | .02245 | .02619 | .02994 | .03369 | .03744 |
| | .99997 | .99987 | .99971 | .99948 | .99919 | .99883 | .99841 | .99792 | .99756 | .99714 |
| .60 | .00374 | .00748 | .01122 | .01496 | .01870 | .02244 | .02618 | .02992 | .03366 | .03739 |
| | .99996 | .99984 | .99965 | .99938 | .99903 | .99860 | .99809 | .99750 | .99683 | .99609 |
| .70 | .00374 | .00748 | .01122 | .01496 | .01869 | .02243 | .02616 | .02989 | .03362 | .03734 |
| | .99995 | .99982 | .99959 | .99927 | .99886 | .99836 | .99777 | .99709 | .99631 | .99544 |
| .80 | .00374 | .00748 | .01122 | .01495 | .01869 | .02242 | .02614 | .02986 | .03358 | .03729 |
| | .99995 | .99979 | .99953 | .99917 | .99870 | .99813 | .99746 | .99667 | .99579 | .99480 |
| .90 | .00374 | .00748 | .01122 | .01495 | .01868 | .02240 | .02612 | .02983 | .03353 | .03722 |
| | .99994 | .99977 | .99948 | .99907 | .99854 | .99790 | .99714 | .99626 | .99527 | .99416 |
| 1.00 | .00374 | .00748 | .01121 | .01494 | .01867 | .02233 | .02610 | .02979 | .03348 | .03715 |
| | .99994 | .99974 | .99942 | .99896 | .99838 | .99767 | .99683 | .99585 | .99475 | .99352 |

$U/K+IV/K'$
 $\frac{-1}{1}$
 $U+IV=SN$ $(A+IB)$

K=SIN 80

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0.00 | .00322 | .00644 | .00966 | .01289 | .01611 | .01934 | .02258 | .02582 | .02906 | .03231 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .00322 | .00644 | .00966 | .01289 | .01611 | .01934 | .02258 | .02582 | .02906 | .03231 |
| | .99999 | .99997 | .99994 | .99990 | .99984 | .99977 | .99968 | .99959 | .99948 | .99935 |
| .20 | .00322 | .00644 | .00966 | .01289 | .01611 | .01934 | .02257 | .02581 | .02905 | .03230 |
| | .99999 | .99995 | .99988 | .99979 | .99968 | .99954 | .99937 | .99917 | .99895 | .99870 |
| .30 | .00322 | .00644 | .00966 | .01289 | .01611 | .01934 | .02257 | .02580 | .02904 | .03228 |
| | .99998 | .99992 | .99983 | .99969 | .99952 | .99930 | .99905 | .99876 | .99843 | .99806 |
| .40 | .00322 | .00644 | .00966 | .01288 | .01611 | .01933 | .02256 | .02579 | .02902 | .03226 |
| | .99997 | .99990 | .99977 | .99959 | .99936 | .99907 | .99874 | .99835 | .99791 | .99741 |
| .50 | .00322 | .00644 | .00966 | .01288 | .01610 | .01933 | .02255 | .02578 | .02900 | .03223 |
| | .99997 | .99987 | .99971 | .99949 | .99920 | .99884 | .99842 | .99794 | .99739 | .99677 |
| .60 | .00322 | .00644 | .00966 | .01288 | .01610 | .01932 | .02254 | .02576 | .02908 | .03219 |
| | .99996 | .99985 | .99965 | .99938 | .99904 | .99861 | .99811 | .99753 | .99687 | .99613 |
| .70 | .00322 | .00644 | .00966 | .01288 | .01609 | .01931 | .02252 | .02574 | .02894 | .03215 |
| | .99995 | .99982 | .99960 | .99928 | .99888 | .99838 | .99779 | .99712 | .99635 | .99549 |
| .80 | .00322 | .00644 | .00966 | .01287 | .01609 | .01930 | .02251 | .02571 | .02891 | .03210 |
| | .99995 | .99979 | .99954 | .99918 | .99872 | .99817 | .99748 | .99671 | .99583 | .99485 |
| .90 | .00322 | .00644 | .00966 | .01287 | .01608 | .01929 | .02249 | .02568 | .02867 | .03205 |
| | .99994 | .99977 | .99948 | .99906 | .99856 | .99792 | .99717 | .99630 | .99532 | .99422 |
| 1.00 | .00322 | .00644 | .00965 | .01287 | .01607 | .01927 | .02247 | .02565 | .02882 | .03199 |
| | .99994 | .99974 | .99942 | .99897 | .99763 | .99686 | .99589 | .99480 | .99358 | |

$$\begin{aligned} U/K + IV/K' \\ -1 \\ J+IV = SN \quad (A+B) \end{aligned}$$

K=Sin 85

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .09 | 1/A = .10 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0.00 | .00262 | .00524 | .00786 | .01148 | .01311 | .01574 | .01837 | .02100 | .02364 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .00262 | .00524 | .00786 | .01148 | .01311 | .01574 | .01837 | .02100 | .02364 |
| | .99999 | .99997 | .99994 | .99990 | .99984 | .99977 | .99969 | .99959 | .99948 |
| .20 | .00262 | .00524 | .00786 | .01148 | .01311 | .01574 | .01836 | .02100 | .02363 |
| | .99999 | .99995 | .99995 | .99990 | .99988 | .99980 | .99977 | .99971 | .99966 |
| .30 | .00262 | .00524 | .00786 | .01148 | .01311 | .01573 | .01836 | .02099 | .02352 |
| | .99998 | .99992 | .99983 | .99969 | .99952 | .99931 | .99906 | .99877 | .99807 |
| .40 | .00262 | .00524 | .00786 | .01148 | .01310 | .01573 | .01835 | .02098 | .02361 |
| | .99997 | .99990 | .99990 | .99977 | .99959 | .99936 | .99908 | .99836 | .99792 |
| .50 | .00262 | .00524 | .00786 | .01148 | .01310 | .01572 | .01835 | .02097 | .02359 |
| | .99997 | .99987 | .99971 | .99949 | .99920 | .99885 | .99843 | .99795 | .99740 |
| .60 | .00262 | .00524 | .00786 | .01148 | .01310 | .01572 | .01834 | .02095 | .02357 |
| | .99996 | .99985 | .99966 | .99939 | .99904 | .99867 | .99812 | .99754 | .99688 |
| .70 | .00262 | .00524 | .00786 | .01148 | .01310 | .01571 | .01832 | .02094 | .02355 |
| | .99996 | .99986 | .99969 | .99939 | .99908 | .99831 | .99791 | .99713 | .99637 |
| .80 | .00262 | .00524 | .00786 | .01147 | .01309 | .01570 | .01831 | .02092 | .02352 |
| | .99995 | .99980 | .99954 | .99918 | .99882 | .99815 | .99750 | .99673 | .99545 |
| .90 | .00262 | .00524 | .00786 | .01147 | .01308 | .01563 | .01830 | .02089 | .02349 |
| | .99994 | .99977 | .99948 | .99908 | .99856 | .99793 | .99718 | .99632 | .99534 |
| 1.00 | .00262 | .00524 | .00785 | .01147 | .01308 | .01561 | .01828 | .02087 | .02345 |
| | .99994 | .99974 | .99943 | .99908 | .99841 | .99770 | .99697 | .99592 | .99483 |

$U/K + IV/K'$
 $J + IV - SN^{-1} (A + iB)$

K = SIN 86

| B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0.00 | .00247 | .00495 | .00742 | .00960 | .01238 | .01486 | .01734 | .01983 | .02232 | .02482 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .00247 | .00495 | .00742 | .00960 | .01238 | .01486 | .01734 | .01983 | .02232 | .02482 |
| | .99999 | .99997 | .99994 | .99990 | .99984 | .99977 | .99969 | .99959 | .99948 | .99936 |
| .20 | .00247 | .00495 | .00742 | .00960 | .01238 | .01486 | .01734 | .01983 | .02231 | .02481 |
| | .99999 | .99995 | .99989 | .99980 | .99978 | .99975 | .99973 | .99971 | .99966 | .99951 |
| .30 | .00247 | .00495 | .00742 | .00960 | .01237 | .01485 | .01734 | .01982 | .02231 | .02480 |
| | .99998 | .99992 | .99983 | .99976 | .99952 | .99931 | .99906 | .99877 | .99844 | .99807 |
| .40 | .00247 | .00495 | .00742 | .00960 | .01237 | .01485 | .01733 | .01981 | .02229 | .02478 |
| | .99997 | .99990 | .99977 | .99959 | .99916 | .99908 | .99875 | .99836 | .99792 | .99743 |
| .50 | .00247 | .00495 | .00742 | .00960 | .01237 | .01485 | .01732 | .01980 | .02228 | .02476 |
| | .99997 | .99987 | .99971 | .99946 | .99920 | .99888 | .99853 | .99795 | .99740 | .99579 |
| .60 | .00247 | .00495 | .00742 | .00960 | .01237 | .01484 | .01731 | .01978 | .02226 | .02473 |
| | .99996 | .99985 | .99966 | .99936 | .99904 | .99862 | .99812 | .99754 | .99689 | .99615 |
| .70 | .00247 | .00495 | .00742 | .00960 | .01236 | .01484 | .01730 | .01977 | .02223 | .02469 |
| | .99996 | .99982 | .99960 | .99929 | .99888 | .99831 | .99781 | .9974 | .99637 | .99552 |
| .80 | .00247 | .00495 | .00742 | .00960 | .01236 | .01483 | .01729 | .01975 | .02221 | .02466 |
| | .99995 | .99980 | .99954 | .99918 | .99872 | .99811 | .99750 | .99673 | .99586 | .99488 |
| .90 | .00247 | .00495 | .00742 | .00960 | .01235 | .01482 | .01727 | .01973 | .02217 | .02462 |
| | .99994 | .99977 | .99948 | .99908 | .99857 | .99793 | .99719 | .99632 | .99535 | .99425 |
| 1.00 | .00247 | .00495 | .00742 | .00960 | .01235 | .01481 | .01726 | .01970 | .02214 | .02457 |
| | .99994 | .99975 | .99943 | .99908 | .99858 | .99771 | .99688 | .99592 | .99454 | .99363 |

$U/K+IV/K'$
 $U+IV=SN^{-1}(A+[6])$

K=STN 87

| B | $1/A = .01$ | $1/A = .02$ | $1/A = .03$ | $1/A = .04$ | $1/A = .05$ | $1/A = .06$ | $1/A = .07$ | $1/A = .08$ | $1/A = .09$ | $1/A = .10$ |
|------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 0.00 | .00231 1.00000 | .00462 1.00000 | .00693 1.00000 | .00924 1.00000 | .01155 1.00000 | .01386 1.00000 | .01616 1.00000 | .01850 1.00000 | .02083 1.00000 | .02316 1.00000 |
| .10 | .00231 .99999 | .00462 .99997 | .00693 .99994 | .00924 .99990 | .01155 .99984 | .01386 .99977 | .01616 .99969 | .01850 .99959 | .02083 .99948 | .02316 .99936 |
| .20 | .00231 .99999 | .00462 .99995 | .00693 .99989 | .00924 .99980 | .01155 .99968 | .01386 .99954 | .01616 .99937 | .01850 .99918 | .02082 .99896 | .02315 .99871 |
| .30 | .00231 .99998 | .00462 .99992 | .00693 .99983 | .00924 .99969 | .01155 .99952 | .01386 .99931 | .01616 .99906 | .01849 .99877 | .02081 .99844 | .02316 .99837 |
| .40 | .00231 .99997 | .00462 .99990 | .00693 .99977 | .00923 .99959 | .01155 .99936 | .01386 .99903 | .01616 .99875 | .01848 .99836 | .02080 .99792 | .02316 .99743 |
| .50 | .00231 .99997 | .00462 .99987 | .00692 .99967 | .00923 .99949 | .01154 .99920 | .01385 .99885 | .01616 .9983 | .01867 .99795 | .02079 .99740 | .02316 .99679 |
| .60 | .00231 .99996 | .00462 .99985 | .00692 .99966 | .00923 .99939 | .01154 .99904 | .01385 .99862 | .01615 .99812 | .01846 .99754 | .02077 .99689 | .02317 .99615 |
| .70 | .00231 .99996 | .00462 .99982 | .00692 .99960 | .00923 .99929 | .01154 .99888 | .01384 .99839 | .01614 .99701 | .01845 .99614 | .02075 .99637 | .02316 .99552 |
| .80 | .00231 .99995 | .00462 .99980 | .00692 .99954 | .00923 .99918 | .01153 .99872 | .01383 .99816 | .01613 .99750 | .01843 .99673 | .02072 .9956 | .02316 .99469 |
| .90 | .00231 .99994 | .00462 .99977 | .00692 .99948 | .00923 .99908 | .01153 .99857 | .01382 .99793 | .01612 .99719 | .01841 .99633 | .02069 .99535 | .02316 .99426 |
| 1.00 | .00231 .99994 | .00461 .99975 | .00692 .99943 | .00922 .99908 | .01152 .99841 | .01381 .99771 | .01610 .99680 | .01838 .99592 | .02066 .99484 | .02316 .99363 |

$$U+2V=SS - \frac{1}{4}(A_1+A_3)$$

K=SIN 68

| B | $1/A = .01$ | $1/A = .52$ | $1/A = .03$ | $1/\bar{A} = .04$ | $1/A = .05$ | $1/A = .06$ | $1/\bar{A} = .07$ | $1/A = .08$ | $1/\bar{A} = .09$ | $1/A = .10$ |
|------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 0.00 | .0 1.0 | .00422 1.00000 | .00633 1.00000 | .00544 1.00000 | .01056 1.00000 | .01267 1.00000 | .01479 1.00000 | .01691 1.00000 | .01904 1.00000 | .02117 1.00000 |
| .10 | .00211 .99999 | .00422 .99997 | .00633 .99994 | .00844 .99590 | .01056 .99984 | .01267 .99977 | .01479 .99969 | .01691 .99959 | .01904 .99948 | .02117 .99938 |
| .20 | .00211 .99999 | .00422 .99995 | .00633 .99989 | .00844 .99983 | .01056 .99968 | .01267 .99954 | .01479 .99937 | .01691 .99918 | .01903 .99896 | .02116 .99871 |
| .30 | .00211 .99996 | .00422 .99932 | .00633 .99963 | .00844 .99952 | .01056 .99952 | .01267 .99931 | .01479 .99906 | .01691 .99877 | .01903 .99844 | .02115 .99807 |
| .40 | .00211 .99997 | .00422 .99990 | .00633 .99977 | .00844 .99959 | .01056 .99936 | .01267 .99926 | .01479 .99915 | .01691 .99878 | .01903 .99836 | .02113 .99743 |
| .50 | .00211 .99997 | .00422 .99987 | .00633 .99971 | .00844 .99949 | .01055 .99920 | .01266 .99895 | .01477 .99843 | .01689 .99795 | .01900 .99741 | .02111 .99675 |
| .60 | .00211 .99996 | .00422 .99985 | .00633 .99966 | .00844 .99939 | .01056 .99904 | .01266 .99862 | .01477 .99812 | .01688 .99754 | .01908 .99689 | .02109 .99615 |
| .70 | .00211 .99996 | .00422 .99982 | .00633 .99960 | .00844 .99923 | .01054 .99888 | .01265 .99833 | .01476 .99731 | .01666 .99714 | .01896 .99637 | .02106 .99552 |
| .80 | .00211 .99995 | .00422 .99980 | .00633 .99954 | .00843 .99918 | .01054 .99873 | .01264 .99815 | .01475 .99750 | .01684 .99673 | .01894 .99586 | .02103 .99509 |
| .90 | .00211 .99994 | .00422 .99977 | .00633 .99948 | .00843 .99920 | .01054 .99857 | .01264 .99794 | .01474 .99719 | .01683 .99623 | .01891 .99535 | .02100 .99426 |
| 1.00 | .00211 .99954 | .00422 .99975 | .00633 .99945 | .00845 .99820 | .01053 .99841 | .01263 .99771 | .01472 .99658 | .01681 .99592 | .01880 .99484 | .02096 .99363 |

$UVA + IVAK^*$
 -1
 $UV = SN \quad (\Lambda + 18)$

$K = \sin \theta_9$

| B | $1/A = .01$ | $1/A = .02$ | $1/A = .03$ | $1/A = .04$ | $1/A = .05$ | $1/A = .06$ | $1/A = .07$ | $1/A = .08$ | $1/A = .09$ | $1/A = .10$ |
|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 0.00 | .00184 | .00268 | .00352 | .00436 | .00521 | .00606 | .00692 | .00775 | .00859 | .00943 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .00184 | .00363 | .00552 | .00756 | .00951 | .01155 | .01290 | .01475 | .01661 | .01846 |
| | .99999 | .99997 | .99994 | .99990 | .99984 | .99977 | .99969 | .99959 | .99946 | .99936 |
| .20 | .00184 | .00368 | .00552 | .00736 | .00921 | .01105 | .01290 | .01475 | .01660 | .01846 |
| | .99999 | .99995 | .99989 | .99980 | .99970 | .99954 | .99937 | .99918 | .99896 | .99871 |
| .30 | .00184 | .00368 | .00552 | .00738 | .00921 | .01105 | .01290 | .01474 | .01659 | .01845 |
| | .99998 | .99991 | .99983 | .99975 | .99962 | .99952 | .99941 | .99927 | .99842 | .99807 |
| .40 | .00184 | .00368 | .00552 | .00736 | .00921 | .01105 | .01289 | .01474 | .01655 | .01843 |
| | .99997 | .99990 | .99987 | .99977 | .99969 | .99956 | .99942 | .99926 | .99792 | .99743 |
| .50 | .00184 | .00368 | .00552 | .00736 | .00920 | .01104 | .01289 | .01473 | .01657 | .01842 |
| | .99997 | .99987 | .99982 | .99971 | .99960 | .99949 | .99930 | .99815 | .99795 | .99741 |
| .60 | .00184 | .00368 | .00552 | .00736 | .00920 | .01104 | .01288 | .01472 | .01656 | .01840 |
| | .99996 | .99985 | .99986 | .99975 | .99965 | .99955 | .99944 | .99812 | .99755 | .99699 |
| .70 | .00184 | .00368 | .00552 | .00736 | .00920 | .01104 | .01287 | .01471 | .01654 | .01837 |
| | .99996 | .99985 | .99980 | .99969 | .99958 | .99948 | .99939 | .99781 | .99638 | .99552 |
| .80 | .00184 | .00368 | .00552 | .00736 | .00919 | .01103 | .01286 | .01469 | .01652 | .01834 |
| | .99995 | .99985 | .99980 | .99969 | .99958 | .99947 | .99936 | .99750 | .99673 | .99566 |
| .90 | .00184 | .00368 | .00552 | .00736 | .00919 | .01102 | .01285 | .01468 | .01650 | .01831 |
| | .99994 | .99977 | .99968 | .99958 | .99948 | .99937 | .99794 | .99719 | .99633 | .99426 |
| 1.00 | .00184 | .00368 | .00552 | .00735 | .00919 | .01101 | .01284 | .01466 | .01647 | .01826 |
| | .99994 | .99975 | .99963 | .99953 | .99943 | .99931 | .99771 | .99688 | .99593 | .99363 |

U/K+IV/K'

-1

U+IV=SN

(A+IB)

K=SIN 5

| B | 1/A± .10 | 1/A± .20 | 1/A± .30 | 1/A± .40 | 1/A± .50 | 1/A± .60 | 1/A± .70 | 1/A± .80 | 1/A± .90 | 1/A= 1.00 |
|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| 0.00 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .05941 | .61256 | .49541 | .41256 | .34610 | .26638 | .23490 | .18171 | .12242 | .06000 | .00000 |
| .10 | .96698 | .91559 | .97912 | .97161 | .96281 | .95200 | .93771 | .91650 | .87466 | .79997 |
| .15 | .85935 | .61263 | .29554 | .41285 | .34659 | .26928 | .23663 | .18561 | .13293 | .06350 |
| .20 | .97400 | .97120 | .95829 | .94335 | .92597 | .90494 | .87804 | .84132 | .8695 | .71956 |
| .25 | .63918 | .61277 | .49593 | .41364 | .34806 | .29194 | .24151 | .19492 | .15267 | .11896 |
| .30 | .96109 | .95682 | .93755 | .91536 | .88983 | .85952 | .82271 | .77680 | .72113 | .65965 |
| .35 | .85890 | .61301 | .49657 | .41495 | .35046 | .29615 | .24882 | .20749 | .17296 | .14670 |
| .40 | .94629 | .94249 | .91695 | .88776 | .85666 | .81657 | .77233 | .72164 | .66640 | .61071 |
| .45 | .85852 | .61334 | .49746 | .41675 | .35370 | .30156 | .25779 | .22129 | .19225 | .17048 |
| .50 | .93562 | .92820 | .89652 | .86065 | .82058 | .77608 | .72678 | .67396 | .62033 | .56900 |
| .55 | .85803 | .61377 | .49860 | .41901 | .35769 | .30816 | .26779 | .23542 | .21041 | .19173 |
| .60 | .92311 | .91397 | .87630 | .83412 | .78805 | .73824 | .68562 | .63218 | .58047 | .53260 |
| .65 | .85747 | .61429 | .49997 | .42171 | .36233 | .31548 | .27836 | .24947 | .22753 | .21117 |
| .70 | .91178 | .89982 | .85634 | .80826 | .75684 | .72999 | .64534 | .59511 | .54536 | .50034 |
| .75 | .85682 | .61489 | .50156 | .42480 | .36752 | .32354 | .28922 | .26324 | .24375 | .22922 |
| .80 | .89865 | .88574 | .83666 | .76312 | .72711 | .67021 | .61445 | .56191 | .51405 | .47144 |
| .85 | .85611 | .61559 | .50338 | .42825 | .37315 | .33158 | .30018 | .27667 | .25918 | .24613 |
| .90 | .88672 | .87176 | .81729 | .75875 | .69886 | .63973 | .58352 | .53194 | .48586 | .44535 |
| .95 | .85534 | .61637 | .50539 | .43202 | .37915 | .34006 | .31111 | .28972 | .27390 | .26210 |
| 1.00 | .87501 | .85700 | .79826 | .73517 | .67206 | .61137 | .55510 | .50471 | .46030 | .42165 |
| | .85422 | .61724 | .50760 | .43606 | .38542 | .34870 | .30236 | .28799 | .27725 | |

$U/K+IV/K'$
 $\frac{U}{K}$
 $U+IV=SN \quad (A+IB)$

$K = \sin 10$

| B | $z/A = .10$ | $1/A = .20$ | $1/A = .30$ | $1/A = .40$ | $1/A = .50$ | $1/A = .60$ | $1/A = .70$ | $1/A = .80$ | $1/A = .90$ | $1/A = 1.00$ |
|------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 0.00 | .36839 1.00000 | 1.00000 .62448 | 1.00000 .62850 | 1.00000 .51571 | 1.00000 .42967 | 1.00000 .35665 | 1.00000 .28932 | 1.00000 .22302 | 1.00000 .15060 | 1.00000 .00000 |
| .10 | .38833 .99776 | .97405 .82422 | .97564 .62870 | .96942 .51601 | .96117 .43025 | .95066 .35774 | .93655 .29191 | .91544 .22033 | .87759 .16349 | .79865 .10255 |
| .20 | .39816 .99551 | .94838 .82346 | .95135 .62913 | .93897 .51688 | .92269 .43196 | .90228 .36092 | .87575 .29762 | .83924 .23992 | .78694 .18763 | .71751 .14599 |
| .30 | .38789 .99328 | .92321 .82225 | .92717 .62957 | .90861 .51832 | .88493 .43478 | .85564 .36595 | .81930 .30667 | .77373 .25522 | .71827 .21240 | .65691 .17988 |
| .40 | .38750 .99104 | .89872 .82068 | .90316 .63032 | .87904 .52031 | .84814 .43057 | .81128 .37253 | .76781 .31750 | .71763 .27198 | .66273 .23588 | .60728 .20687 |
| .50 | .38699 .98882 | .87502 .81885 | .87938 .63128 | .84980 .52280 | .81256 .44322 | .76950 .30032 | .72117 .32954 | .66902 .28909 | .61586 .25793 | .56490 .23471 |
| .60 | .38639 .98661 | .85215 .81383 | .85587 .63244 | .82116 .52576 | .77115 .4412 | .73039 .38900 | .67895 .34225 | .62633 .30106 | .57522 .27867 | .52783 .25827 |
| .70 | .38567 .98442 | .83013 .81472 | .83268 .63378 | .79323 .52915 | .74559 .45464 | .69389 .39832 | .64063 .35526 | .58837 .32265 | .53935 .29825 | .49490 .28009 |
| .80 | .38485 .98223 | .80694 .81256 | .80986 .63531 | .76605 .53292 | .71432 .46116 | .65987 .40606 | .60571 .36825 | .55430 .33877 | .50720 .31683 | .46533 .30049 |
| .90 | .38392 .98007 | .78854 .81042 | .78743 .63700 | .73968 .53702 | .68457 .46807 | .62818 .41306 | .57376 .35136 | .52346 .35439 | .47834 .33449 | .43858 .31968 |
| 1.00 | .38293 .97793 | .76889 .80832 | .76544 .63866 | .71415 .54141 | .65629 .47528 | .59863 .42820 | .54463 .39421 | .49538 .36949 | .45204 .35134 | .41423 .33784 |

$U/K + IV/K'$
 -1
 $U + IV = SN$ (A+IC)

K SYN 15

| B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 0.00 | .24665 | .55680 | 1.00000 | 1.06000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| | 1.00000 | 1.00000 | .79089 | .61948 | .50845 | .41807 | .33666 | .26091 | .17520 | .00000 |
| .10 | .24662 | .55626 | .96123 | .96422 | .95784 | .94815 | .93647 | .91358 | .87572 | .79641 |
| | .99848 | .99104 | .73029 | .61968 | .50904 | .42007 | .34122 | .26698 | .19008 | .11895 |
| .20 | .24653 | .55463 | .92325 | .92664 | .91603 | .89727 | .87161 | .83557 | .78246 | .71400 |
| | .99696 | .98216 | .78058 | .62026 | .51078 | .42355 | .34768 | .27933 | .21787 | .16908 |
| .30 | .24639 | .55197 | .88666 | .89346 | .87507 | .84618 | .81315 | .76835 | .71333 | .65222 |
| | .99544 | .97343 | .78603 | .62122 | .51360 | .42905 | .35783 | .29677 | .24627 | .20604 |
| .40 | .24619 | .54835 | .85180 | .85807 | .83512 | .80143 | .75971 | .71060 | .65641 | .60145 |
| | .99393 | .96494 | .78295 | .62254 | .51739 | .43620 | .36996 | .31576 | .27307 | .24120 |
| .50 | .24793 | .54394 | .81875 | .82503 | .79649 | .75732 | .71118 | .66042 | .60820 | .55794 |
| | .99242 | .95674 | .77961 | .62422 | .52204 | .44463 | .38338 | .33510 | .29811 | .27062 |
| .60 | .24764 | .53885 | .78748 | .79206 | .75934 | .71596 | .66714 | .61620 | .56628 | .51977 |
| | .99094 | .94586 | .77625 | .62622 | .52741 | .45397 | .39746 | .35415 | .32153 | .29732 |
| .70 | .24724 | .53256 | .75786 | .76097 | .72378 | .67730 | .62706 | .57678 | .52916 | .48576 |
| | .98942 | .94134 | .77300 | .62854 | .53336 | .46394 | .41180 | .37267 | .34355 | .32192 |
| .80 | .24682 | .52599 | .72978 | .72915 | .68987 | .64124 | .59047 | .54130 | .49588 | .45515 |
| | .98793 | .93420 | .76998 | .63114 | .53977 | .47430 | .42613 | .39057 | .36430 | .34480 |
| .90 | .24634 | .51892 | .70310 | .69936 | .65762 | .60760 | .55693 | .50912 | .46579 | .42739 |
| | .98645 | .92745 | .76724 | .63399 | .54652 | .48488 | .44030 | .40780 | .38394 | .36622 |
| 1.00 | .24560 | .51144 | .67771 | .67072 | .62702 | .57622 | .52608 | .47976 | .43838 | .40207 |
| | .98498 | .92109 | .76621 | .63708 | .55353 | .49552 | .45419 | .42437 | .40256 | .38638 |

$U/K+IV/K^*$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 20

| B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 0.00 | .18346 | .30630 | .67266 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| | 1.00000 | 1.00000 | .67266 | .75402 | .59637 | .48445 | .38895 | .29807 | .19950 | .00000 |
| .10 | .18344 | .36707 | .66982 | .94834 | .95124 | .93484 | .93115 | .91073 | .87296 | .79315 |
| | .93677 | .99413 | .97728 | .75302 | .59673 | .48562 | .39149 | .30381 | .21625 | .13485 |
| .20 | .18339 | .36738 | .66182 | .89828 | .90306 | .88873 | .86593 | .82999 | .77830 | .70888 |
| | .99755 | .98828 | .95574 | .75028 | .59779 | .48903 | .39864 | .31846 | .24738 | .19127 |
| .30 | .18329 | .38663 | .64989 | .85107 | .85599 | .83556 | .80344 | .76018 | .71602 | .64539 |
| | .99632 | .98249 | .93612 | .74645 | .59954 | .49440 | .40924 | .33761 | .27098 | .23481 |
| .40 | .18315 | .38467 | .63533 | .80650 | .81047 | .78496 | .74702 | .70001 | .64710 | .59299 |
| | .99510 | .97677 | .91868 | .74218 | .60192 | .50134 | .42207 | .35035 | .30858 | .27160 |
| .50 | .18297 | .38261 | .61317 | .76514 | .76682 | .73726 | .69571 | .64756 | .59712 | .54793 |
| | .99388 | .97114 | .90333 | .73797 | .60489 | .50944 | .43614 | .37924 | .33601 | .30400 |
| .60 | .18275 | .36018 | .60212 | .72660 | .72526 | .69266 | .64903 | .60124 | .55334 | .50828 |
| | .99267 | .96563 | .96563 | .73413 | .60838 | .51636 | .45077 | .39965 | .36144 | .33319 |
| .70 | .18249 | .37736 | .58466 | .69061 | .68690 | .65107 | .60666 | .55987 | .51456 | .47286 |
| | .99146 | .96026 | .87814 | .73084 | .61233 | .52779 | .46552 | .41932 | .38515 | .35987 |
| .80 | .18220 | .37418 | .56709 | .65694 | .64880 | .51240 | .56795 | .52262 | .47980 | .44097 |
| | .99026 | .95503 | .86786 | .72817 | .61666 | .53752 | .48013 | .43815 | .40732 | .38450 |
| .90 | .18186 | .37066 | .54960 | .62537 | .61391 | .57650 | .53252 | .48684 | .44683 | .41201 |
| | .99-06 | .94998 | .85880 | .72613 | .62133 | .54737 | .49443 | .45612 | .42612 | .40739 |
| 1.0 | .18149 | .36684 | .53234 | .59573 | .56118 | .54317 | .50000 | .45804 | .41969 | .38566 |
| | .98787 | .94510 | .85103 | .72471 | .62625 | .55722 | .50034 | .47324 | .44768 | .42876 |

$$U + IV = SN \quad (A + IB)$$

K=SIN 25

| B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|-------------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 0.00 | .14511 1.00000 | .30105 1.00000 | .48684 1.00000 | .76093 .71934 | 1.00000 .56048 | 1.00000 .44425 | 1.00000 .33797 | 1.00000 .22514 | 1.00000 .09000 | 1.00000 .00000 |
| .10 | .14510 .99894 | .30089 .99525 | .48594 .98631 | .76637 .94811 | .93498 .70962 | .93618 .56127 | .92596 .44679 | .90658 .34416 | .66910 .24370 | .76673 .15123 |
| .20 | .14505 .99784 | .30043 .99052 | .48330 .97282 | .73616 .90854 | .87261 .70620 | .87380 .56357 | .85486 .45368 | .82190 .35988 | .77123 .27797 | .70194 .21362 |
| .30 | .14497 .99682 | .29966 .98582 | .47900 .95973 | .70290 .87913 | .81446 .70178 | .81408 .56722 | .78862 .46431 | .74846 .36022 | .69590 .31238 | .63617 .26163 |
| .40 | .14487 .99577 | .29859 .98117 | .47321 .94720 | .67042 .85643 | .76096 .69740 | .75783 .57198 | .72804 .47677 | .68501 .40195 | .63434 .34421 | .50165 .30159 |
| .50 | .14473 .99471 | .29723 .97659 | .46611 .93534 | .63864 .83842 | .71192 .69366 | .70547 .57764 | .67309 .49026 | .62964 .42355 | .58190 .37334 | .53465 .33639 |
| .60 | .14456 .99366 | .29559 .97209 | .45792 .92425 | .60864 .82389 | .66697 .69037 | .65712 .58396 | .62339 .50411 | .58078 .44437 | .53611 .40004 | .49324 .36741 |
| .70 | .14436 .99262 | .29368 .96766 | .44884 .91396 | .58011 .81209 | .62570 .68909 | .61267 .55076 | .57842 .51791 | .53726 .46417 | .49553 .42462 | .45623 .39546 |
| .80 | .14414 .99158 | .29151 .96334 | .43906 .90449 | .55301 .80248 | .58775 .68830 | .57191 .59791 | .53766 .53146 | .49821 .43291 | .45919 .44735 | .42302 .42109 |
| .90 | .14388 .99054 | .28910 .95913 | .42874 .89585 | .52728 .79470 | .55276 .66841 | .53456 .60528 | .50065 .51462 | .46297 .50060 | .42642 .46846 | .39291 .44468 |
| 1.00 | .14359 .98951 | .28647 .95505 | .41805 .66600 | .50287 .76844 | .52050 .68930 | .50032 .61279 | .46697 .55734 | .43103 .51331 | .39673 .46813 | .36555 .46652 |

$U/K + IV/V - 1$
 $U + IV = SN \quad (A + IB)$

K=SIN 30

| B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.03 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 0.00 | .11965 | .24581 | .38006 | .56807 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | .65046 | .50937 | .38306 | .25341 | .00000 | |
| .10 | .11964 | .24569 | .36750 | .56536 | .84299 | .92028 | .91757 | .90057 | .86386 | .78294 |
| | .99905 | .99587 | .98908 | .97323 | .88357 | .65720 | .51142 | .38946 | .27375 | .16874 |
| .20 | .11960 | .24534 | .36584 | .55760 | .77311 | .84465 | .83874 | .81031 | .76141 | .69286 |
| | .99810 | .99175 | .97828 | .94766 | .84033 | .65417 | .51711 | .40562 | .31066 | .23752 |
| .30 | .11951 | .24475 | .36312 | .54572 | .71699 | .77537 | .76594 | .73197 | .68236 | .62418 |
| | .98766 | .99715 | .96770 | .92417 | .81085 | .65088 | .52540 | .42613 | .34752 | .26925 |
| .40 | .11945 | .24396 | .37941 | .53080 | .66823 | .71295 | .70014 | .66441 | .61754 | .56711 |
| | .99620 | .98361 | .95743 | .90320 | .78921 | .64844 | .53527 | .44762 | .38080 | .33182 |
| .50 | .11934 | .24290 | .37478 | .51389 | .62453 | .65701 | .64130 | .60575 | .56239 | .51790 |
| | .99526 | .97961 | .94758 | .88487 | .77294 | .64734 | .54593 | .46856 | .41070 | .36632 |
| .60 | .11920 | .24165 | .36934 | .49578 | .58479 | .60690 | .58886 | .55436 | .51443 | .47465 |
| | .99431 | .97567 | .93813 | .86905 | .76068 | .64765 | .55692 | .48841 | .43765 | .40038 |
| .70 | .11904 | .24018 | .36319 | .47703 | .54839 | .56192 | .54212 | .50898 | .47216 | .43622 |
| | .99338 | .97179 | .92934 | .85553 | .75155 | .64923 | .56794 | .50704 | .46211 | .42900 |
| .80 | .11885 | .23852 | .35643 | .45822 | .51490 | .52144 | .50336 | .46866 | .43458 | .40162 |
| | .99244 | .96801 | .92104 | .84409 | .74489 | .65188 | .57887 | .52450 | .48446 | .45404 |
| .90 | .11865 | .23667 | .34917 | .423450 | .48400 | .48489 | .46293 | .43264 | .40096 | .37088 |
| | .99151 | .96431 | .91332 | .83447 | .74022 | .65537 | .58962 | .54088 | .50500 | .47839 |
| 1.00 | .11841 | .23463 | .34150 | .42113 | .45544 | .45178 | .42927 | .40031 | .37074 | .34297 |
| | .99059 | .96071 | .90619 | .82644 | .73716 | .65957 | .6014 | .55628 | .52400 | .50000 |

$U/K+IV/K^*$
 $^{-1}$
 $U+IV=SN \quad (A+IB)$

K=SIN 35

| B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|-------------------|-------------------|------------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 0.00 | .10139 1.00000 | .20715 1.00000 | .32311 .00000 | .45976 1.00000 | .64588 1.00000 | .1.00000 ,81717 | .1.00000 .59198 | .1.00000 4.3645 | .1.00000 2.8576 | .1.00000 0.0000 |
| .10 | .10138 .99913 | .0705 .9627 | .32270 .9053 | .45823 .97922 | .63806 .95077 | .86977 .79403 | .90246 .59181 | .89162 4.4255 | .85675 3.0776 | .77550 .18600 |
| .20 | .10135 .99825 | .20677 .99255 | .32147 .98114 | .45374 .95900 | .61781 .90764 | .77789 .82629 | .84159 .59189 | .79347 4.5761 | .74636 3.4717 | .68120 .26296 |
| .30 | .10130 .99738 | .20630 .98865 | .31944 .97192 | .446660 .93980 | .59080 .87258 | .70579 .73568 | .73071 .59323 | .70891 4.7624 | .66455 3.8502 | .60899 .31809 |
| .40 | .10122 .99651 | .20564 .98519 | .31666 .96293 | .43721 .92199 | .56110 .84489 | .64504 .72157 | .66024 .59621 | .63687 4.9527 | .59607 4.1848 | .54904 .36246 |
| .50 | .10113 .99564 | .20479 .98156 | .31318 .95425 | .42604 .90577 | .53089 .82321 | .59224 .70902 | .59913 .60072 | .57526 5.1352 | .53324 4.4783 | .49759 .39574 |
| .60 | .10102 .99477 | .20377 .97799 | .30925 .94593 | .41355 .89125 | .50123 .80634 | .54504 .70219 | .54600 .60643 | .52212 .53087 | .48848 .47381 | .45272 .43192 |
| .70 | .10088 .99391 | .20258 .97448 | .30435 .93801 | .40015 .87842 | .47284 .79332 | .50416 .69767 | .49953 .61304 | .4792 .54676 | .44511 .49707 | .41319 .46024 |
| .80 | .10073 .96305 | .20123 .97104 | .29915 .33054 | .38620 .86723 | .44581 .76337 | .46699 .69553 | .45863 .62026 | .43542 .56187 | .40698 .51813 | .37814 .48552 |
| .90 | .10055 .99220 | .19972 .96768 | .29352 .92353 | .37197 .85756 | .42030 .77592 | .43353 .69519 | .42240 .62764 | .39968 .57614 | .37325 .53738 | .34693 .50837 |
| 1.00 | .10035 .99135 | .19806 .96441 | .26753 .91700 | .35769 .81930 | .39633 .77048 | .40329 .69624 | .37013 .63574 | .36796 .58965 | .34324 .55513 | .31903 .52921 |

$U/K + IV/K$
 -1
 $U+IV=SN$ (A+IB)

K=SIN 40

| | | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 0.00 | 0.0000 | .08757 | .17830 | .27615 | .38745 | .52534 | .73569 | .100000 | .100000 | .100000 | .100000 |
| | 1.0000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | .71161 | .90314 | .32417 | .00000 |
| .10 | .08756 | .17822 | .27502 | .38636 | .52154 | .71059 | .86801 | .87742 | .84696 | .76598 | .20966 |
| | .99918 | .99655 | .99144 | .96214 | .96349 | .90056 | .69877 | .50730 | .34739 | | |
| .20 | .08754 | .17790 | .27484 | .38314 | .51080 | .66245 | .76277 | .76826 | .73082 | .66638 | .29059 |
| | .99837 | .99311 | .98294 | .96465 | .92326 | .84603 | .67848 | .51747 | .38776 | | |
| .30 | .08749 | .17758 | .27321 | .37795 | .49475 | .61260 | .67779 | .67702 | .64149 | .59011 | .34823 |
| | .99755 | .98969 | .97458 | .94787 | .89891 | .80446 | .66321 | .53011 | .42496 | | |
| .40 | .08743 | .17702 | .27098 | .37103 | .47523 | .56565 | .60768 | .60146 | .56944 | .52722 | .39326 |
| | .99673 | .98629 | .96642 | .93207 | .87298 | .77601 | .65412 | .54333 | .45669 | | |
| .50 | .08735 | .17531 | .26817 | .36265 | .45378 | .52249 | .54659 | .53853 | .50961 | .47387 | |
| | .99592 | .98294 | .95851 | .91745 | .85144 | .75634 | .64990 | .55648 | .46386 | .43019 | |
| .60 | .08725 | .17545 | .26483 | .35311 | .43156 | .48317 | .49804 | .48537 | .45095 | .42793 | .46149 |
| | .99511 | .97963 | .95091 | .90413 | .83389 | .74287 | .64916 | .56935 | .50757 | | |
| .70 | .08713 | .17445 | .26102 | .34270 | .40931 | .44745 | .45427 | .43969 | .41547 | .38797 | |
| | .99430 | .97638 | .94364 | .89217 | .81981 | .73189 | .65067 | .58189 | .52668 | .48670 | |
| .80 | .08700 | .17331 | .25678 | .33168 | .38754 | .41602 | .41600 | .40054 | .37774 | .35297 | |
| | .99350 | .97319 | .93675 | .80155 | .80868 | .72825 | .65429 | .59408 | .54778 | .51281 | |
| .90 | .08685 | .17204 | .25217 | .32028 | .36655 | .38850 | .38228 | .36617 | .34472 | .32213 | |
| | .99273 | .97007 | .93026 | .87223 | .80004 | .72511 | .65091 | .60592 | .56529 | .53450 | |
| 1.00 | .08668 | .17064 | .24724 | .30069 | .34650 | .35235 | .33590 | .31563 | .29482 | | |
| | .99191 | .96703 | .92419 | .86415 | .79347 | .72386 | .66436 | .61739 | .58150 | .55423 | |

$U/K^2IV/K^2$
 -1
 $U+IV = SW \quad (A+IB)$

K=SIN 45

| B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 0.00 | .07666 | .15572 | .24011 | .33412 | .44551 | .59311 | .89213 | 1.00000 | 1.00000 | 1.00000 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .07665 | .15566 | .23984 | .33327 | .44295 | .58357 | .77530 | .85239 | .83307 | .75375 |
| | .99923 | .99675 | .99206 | .98390 | .96911 | .93702 | .82463 | .56933 | .39478 | .23443 |
| .20 | .07663 | .15545 | .23901 | .33073 | .43555 | .55911 | .68365 | .73027 | .70713 | .64769 |
| | .99845 | .99352 | .98419 | .96810 | .93963 | .88322 | .75900 | .58483 | .433317 | .32068 |
| .30 | .07659 | .15511 | .23766 | .32663 | .42411 | .52714 | .60980 | .63467 | .61226 | .56708 |
| | .99768 | .99030 | .97643 | .95286 | .91267 | .84141 | .72331 | .58478 | .46657 | .37938 |
| .40 | .07654 | .15463 | .23579 | .32111 | .40967 | .49286 | .54787 | .55892 | .53772 | .50168 |
| | .99691 | .98711 | .96884 | .93040 | .80888 | .81027 | .70186 | .58863 | .49411 | .42358 |
| .50 | .07646 | .15402 | .23343 | .31438 | .39324 | .45695 | .49509 | .49740 | .47727 | .44719 |
| | .99614 | .96395 | .96148 | .92492 | .86847 | .78755 | .68959 | .59498 | .51745 | .45893 |
| .60 | .07638 | .15328 | .23063 | .30666 | .37569 | .42669 | .44960 | .46630 | .42705 | .40104 |
| | .99537 | .96084 | .95438 | .91252 | .85135 | .77126 | .68324 | .60264 | .53790 | .48846 |
| .70 | .07626 | .15242 | .22742 | .29614 | .35770 | .39657 | .41004 | .40307 | .38457 | .36148 |
| | .99461 | .97778 | .94759 | .90128 | .83727 | .75985 | .68085 | .61159 | .55629 | .51396 |
| .80 | .07616 | .15143 | .22385 | .28906 | .33974 | .36872 | .37534 | .36594 | .34814 | .32724 |
| | .99385 | .97477 | .94113 | .89120 | .82587 | .75213 | .68144 | .62085 | .57315 | .53651 |
| .90 | .07602 | .15034 | .21995 | .27958 | .32215 | .34312 | .34471 | .33370 | .31655 | .29738 |
| | .99309 | .97163 | .93503 | .88227 | .81681 | .74723 | .68332 | .63036 | .58879 | .55680 |
| 1.00 | .07588 | .14913 | .21578 | .26987 | .30515 | .31963 | .31749 | .30544 | .28891 | .27115 |
| | .99234 | .96896 | .92931 | .87445 | .80975 | .74450 | .68681 | .63996 | .60343 | .57532 |

$U/K+IV/K$
 $U+IV := SN^{-1} (A+IR)$

K=SIN 50

| B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 0.00 | .06775 | .13740 | .21122 | .29236 | .38609 | .50314 | .67599 | .80000 | .93589 | .00000 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .06774 | .13734 | .21098 | .29166 | .38413 | .49722 | .64880 | .80182 | .91246 | .73793 |
| | .99926 | .99691 | .99252 | .98509 | .97235 | .94808 | .88765 | .69164 | .45258 | .26311 |
| .20 | .06772 | .13716 | .21028 | .28957 | .37843 | .48104 | .59519 | .67530 | .67533 | .62428 |
| | .99852 | .99383 | .98509 | .97042 | .94575 | .90130 | .81222 | .65302 | .48276 | .35314 |
| .30 | .06769 | .13646 | .20911 | .26617 | .36951 | .45814 | .53977 | .59332 | .57659 | .53566 |
| | .99778 | .99077 | .97777 | .95624 | .92110 | .86241 | .76563 | .63465 | .50795 | .41075 |
| .40 | .06764 | .13644 | .20751 | .26858 | .35804 | .43190 | .48896 | .51203 | .50177 | .47277 |
| | .99704 | .98773 | .97061 | .94275 | .89698 | .83376 | .73690 | .62778 | .52895 | .45245 |
| .50 | .06758 | .13591 | .20549 | .27596 | .34476 | .40470 | .44381 | .45466 | .44254 | .41827 |
| | .99631 | .98472 | .96365 | .93009 | .87966 | .80841 | .71940 | .62728 | .54736 | .48515 |
| .60 | .06750 | .13527 | .20309 | .26948 | .33034 | .37796 | .40404 | .40722 | .39414 | .37292 |
| | .99557 | .98176 | .95693 | .91939 | .86317 | .79106 | .70920 | .63044 | .56410 | .51232 |
| .70 | .06741 | .13451 | .20033 | .26230 | .31533 | .35242 | .36899 | .36720 | .35365 | .33456 |
| | .99484 | .97884 | .95049 | .90771 | .84937 | .77847 | .70386 | .63580 | .57367 | .53579 |
| .80 | .06731 | .13365 | .19725 | .25459 | .30017 | .32845 | .33801 | .33291 | .31919 | .30171 |
| | .99411 | .97598 | .94436 | .09806 | .83804 | .76962 | .70192 | .64252 | .59431 | .55664 |
| .90 | .06719 | .13270 | .19389 | .24650 | .28516 | .30815 | .31051 | .30318 | .28950 | .27326 |
| | .99339 | .97318 | .93856 | .88950 | .82889 | .76361 | .70229 | .65006 | .60620 | .57512 |
| 1.00 | .06706 | .13164 | .19026 | .23819 | .27053 | .28552 | .28600 | .27716 | .26364 | .24848 |
| | .99267 | .97044 | .93310 | .86194 | .82164 | .76002 | .70433 | .65809 | .62142 | .59284 |

$U/K + IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 55

| B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 0.00 | .06025 | .12205 | .18722 | .25821 | .33889 | .43645 | .56620 | .61717 | .60000 | .60000 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | .51795 | .00000 |
| .10 | .06024 | .12200 | .18701 | .25761 | .33730 | .43210 | .55354 | .71113 | .78021 | .71721 |
| | .99929 | .99703 | .99206 | .98593 | .97445 | .95406 | .91113 | .78578 | .52294 | .29649 |
| .20 | .06022 | .12164 | .18640 | .25584 | .33267 | .41997 | .51656 | .60816 | .63404 | .59537 |
| | .99857 | .99407 | .98577 | .97209 | .94979 | .91177 | .84136 | .70948 | .53375 | .36726 |
| .30 | .06019 | .12157 | .18539 | .25295 | .32535 | .40219 | .47676 | .52806 | .53547 | .50801 |
| | .99786 | .99113 | .97876 | .95867 | .92675 | .87549 | .79320 | .67493 | .54636 | .44112 |
| .40 | .06015 | .12121 | .18399 | .24904 | .31586 | .38111 | .43539 | .46446 | .46316 | .44118 |
| | .99715 | .98821 | .97193 | .94587 | .90587 | .84596 | .76149 | .65914 | .55955 | .47884 |
| .50 | .06009 | .12074 | .18224 | .24423 | .30475 | .35865 | .39711 | .41270 | .40689 | .36795 |
| | .99644 | .98532 | .96528 | .93383 | .88745 | .82281 | .74118 | .65306 | .57281 | .50824 |
| .60 | .06003 | .12017 | .18014 | .23867 | .29257 | .33608 | .36260 | .36966 | .36135 | .34434 |
| | .99573 | .98247 | .95885 | .92266 | .87154 | .80516 | .72863 | .65245 | .58593 | .53278 |
| .70 | .05995 | .11950 | .17773 | .23246 | .27977 | .31419 | .33175 | .33324 | .32349 | .30784 |
| | .99503 | .97967 | .95268 | .91243 | .85810 | .79206 | .72140 | .65510 | .58895 | .55420 |
| .80 | .05986 | .11875 | .17504 | .22582 | .26674 | .29338 | .30423 | .30198 | .29143 | .27663 |
| | .99433 | .97692 | .94680 | .90317 | .84693 | .78261 | .71789 | .65979 | .61164 | .57342 |
| .90 | .05975 | .11790 | .17210 | .21882 | .25374 | .27385 | .27966 | .27406 | .26389 | .25014 |
| | .99363 | .97422 | .94123 | .89488 | .83782 | .77607 | .700 | .66576 | .62400 | .59098 |
| 1.00 | .05964 | .11697 | .16895 | .21158 | .24100 | .25567 | .25766 | .25111 | .23997 | .22697 |
| | .99293 | .97159 | .93599 | .88754 | .83053 | .77182 | .71798 | .67255 | .63601 | .50723 |

$U/K + IV/K'$
 η_{-1}
 $U + IV = SN \quad (A + IB)$

K=SIN 60

| B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 0.00 | .05375 | .10860 | .16664 | .22926 | .29964 | .36306 | .42082 | .48046 | .54000 | .60000 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .05375 | .10876 | .16646 | .22874 | .29830 | .37962 | .48072 | .61411 | .72918 | .68979 |
| | .99931 | .99973 | .99312 | .98655 | .97592 | .95776 | .92262 | .83662 | .60231 | .33497 |
| .20 | .05373 | .10862 | .16593 | .22726 | .29441 | .36990 | .45499 | .56030 | .60421 | .56054 |
| | .99961 | .99426 | .98629 | .97331 | .95260 | .92651 | .85861 | .74861 | .58091 | .42151 |
| .30 | .05371 | .10836 | .16504 | .22670 | .26823 | .35541 | .42204 | .47394 | .49096 | .47273 |
| | .99792 | .99141 | .97955 | .96047 | .93073 | .88423 | .81137 | .70481 | .57942 | .46906 |
| .40 | .05367 | .10806 | .16381 | .22132 | .28017 | .33791 | .38781 | .41869 | .42354 | .40773 |
| | .99723 | .98859 | .97295 | .94819 | .91079 | .85578 | .77676 | .68307 | .58502 | .50193 |
| .50 | .05362 | .10764 | .16227 | .21715 | .27068 | .31094 | .35516 | .37280 | .37139 | .35694 |
| | .99654 | .98579 | .96653 | .93662 | .89307 | .83305 | .75707 | .67302 | .59367 | .52784 |
| .60 | .05356 | .10713 | .16042 | .21231 | .26021 | .29960 | .32516 | .33425 | .32935 | .31581 |
| | .99586 | .98303 | .96032 | .92585 | .87766 | .81543 | .74315 | .66962 | .60375 | .54985 |
| .70 | .05349 | .10655 | .15830 | .20692 | .24914 | .28063 | .29801 | .30143 | .29448 | .28165 |
| | .99517 | .98031 | .95436 | .91597 | .86454 | .80212 | .73470 | .67024 | .61453 | .56938 |
| .80 | .05341 | .10567 | .15593 | .20110 | .23779 | .26243 | .27359 | .27317 | .26500 | .25276 |
| | .99449 | .97765 | .94868 | .90700 | .85356 | .79237 | .73014 | .67339 | .62559 | .58715 |
| .90 | .05331 | .10512 | .15334 | .19496 | .22643 | .24525 | .25167 | .24455 | .23971 | .22801 |
| | .99381 | .97504 | .94328 | .89894 | .84454 | .78547 | .72837 | .67816 | .63671 | .60358 |
| 1.00 | .05321 | .10430 | .15056 | .18861 | .21524 | .22917 | .23197 | .22705 | .21777 | .20658 |
| | .99314 | .97249 | .93820 | .89179 | .83726 | .78086 | .72661 | .68399 | .64772 | .61690 |

$U/K+IV/K^*$
 $U+IV=SN$ $(A+IB)$

K=SIN 65

| B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 0.00 | .04797 | .09703 | .14845 | .20385 | .26567 | .33797 | .42097 | .56048 | .66027 | .1.00051 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | .00000 |
| .10 | .04796 | .09699 | .14829 | .20340 | .26453 | .33514 | .42124 | .53295 | .65832 | .65349 |
| | .99932 | .99720 | .99332 | .98701 | .97696 | .96028 | .92971 | .86203 | .67404 | .37773 |
| .20 | .04795 | .09687 | .14782 | .20206 | .26119 | .32707 | .40098 | .47796 | .52945 | .52000 |
| | .99865 | .99441 | .98665 | .97422 | .95463 | .92310 | .86958 | .77409 | .61965 | .45370 |
| .30 | .04792 | .09666 | .14703 | .19983 | .25589 | .31493 | .37405 | .42317 | .44521 | .43463 |
| | .99797 | .99163 | .98013 | .96181 | .93361 | .89031 | .82370 | .72617 | .60594 | .49334 |
| .40 | .04789 | .09637 | .14595 | .19692 | .24695 | .30009 | .34523 | .37555 | .38400 | .37310 |
| | .99730 | .98886 | .97372 | .94992 | .91438 | .86275 | .79102 | .70087 | .60531 | .52124 |
| .50 | .04785 | .09600 | .14459 | .19326 | .24074 | .28362 | .31716 | .33518 | .33658 | .32566 |
| | .99663 | .98615 | .96746 | .93871 | .89720 | .84046 | .76868 | .68016 | .61021 | .54351 |
| .60 | .04779 | .09555 | .14296 | .18904 | .23163 | .26708 | .29099 | .30089 | .29831 | .26752 |
| | .99596 | .98346 | .96145 | .92826 | .86220 | .82298 | .75397 | .66281 | .61783 | .56369 |
| .70 | .04773 | .09503 | .14106 | .18431 | .22198 | .25052 | .26709 | .27152 | .28657 | .25599 |
| | .99529 | .98081 | .95565 | .91864 | .86935 | .80962 | .74475 | .66195 | .62686 | .58161 |
| .80 | .04766 | .09443 | .13699 | .17919 | .21204 | .23455 | .24544 | .24612 | .23973 | .22942 |
| | .99462 | .97821 | .95011 | .90930 | .85854 | .79971 | .73950 | .68397 | .63663 | .59816 |
| .90 | .04758 | .09376 | .13670 | .17379 | .20206 | .21939 | .22592 | .22399 | .21672 | .20671 |
| | .99396 | .97567 | .94486 | .90203 | .84962 | .79260 | .73711 | .68784 | .64676 | .61364 |
| 1.00 | .04748 | .09303 | .13424 | .16820 | .19219 | .20514 | .20456 | .20832 | .19677 | .16709 |
| | .99330 | .97316 | .93991 | .89503 | .84236 | .78776 | .73682 | .69295 | .65699 | .62822 |

$U/K+IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 70

| B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 0.00 | .04264 | .06622 | .13180 | .18076 | .23508 | .29807 | .37605 | .48445 | .68787 | 1.00000 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | .00000 |
| .10 | .04264 | .06618 | .13166 | .18036 | .23410 | .29568 | .36982 | .46449 | .58022 | .60649 |
| | .99934 | .99726 | .99347 | .98736 | .97772 | .96200 | .93410 | .87664 | .72336 | .42162 |
| .20 | .04262 | .06607 | .13124 | .17919 | .23122 | .28886 | .35324 | .42137 | .47333 | .47452 |
| | .99867 | .99452 | .98698 | .97490 | .95609 | .92629 | .87685 | .79071 | .64855 | .6159 |
| .30 | .04260 | .06589 | .13055 | .17728 | .22663 | .27852 | .33073 | .37568 | .39938 | .39434 |
| | .99801 | .99180 | .98058 | .96280 | .93570 | .89459 | .83222 | .74119 | .62609 | .51328 |
| .40 | .04257 | .06563 | .12960 | .17469 | .22061 | .26580 | .30619 | .33468 | .34484 | .33755 |
| | .99735 | .98910 | .98741 | .95121 | .91699 | .86774 | .79974 | .75385 | .62083 | .53668 |
| .50 | .04253 | .06530 | .12839 | .17149 | .21348 | .25175 | .28194 | .29933 | .30234 | .29410 |
| | .99669 | .98643 | .98620 | .94026 | .90023 | .84584 | .77713 | .69943 | .62292 | .55661 |
| .60 | .04249 | .06491 | .12696 | .16778 | .20554 | .23720 | .25911 | .26903 | .26794 | .25930 |
| | .99603 | .98379 | .98230 | .93005 | .88554 | .82651 | .76196 | .69273 | .62866 | .57456 |
| .70 | .04243 | .06444 | .12530 | .16362 | .19709 | .22273 | .23810 | .24292 | .23938 | .23062 |
| | .99538 | .98120 | .95662 | .92064 | .87291 | .81517 | .75225 | .69084 | .63637 | .59117 |
| .80 | .04237 | .06391 | .12345 | .15913 | .18838 | .20871 | .21898 | .22028 | .21521 | .20644 |
| | .99472 | .97865 | .95120 | .91207 | .86225 | .80519 | .74653 | .69203 | .64515 | .60676 |
| .90 | .04229 | .06332 | .12143 | .15437 | .17961 | .19535 | .20167 | .20050 | .19443 | .18590 |
| | .99907 | .97615 | .94606 | .90435 | .85342 | .79795 | .74373 | .69525 | .65452 | .62149 |
| 1.00 | .04221 | .06267 | .11926 | .14944 | .17092 | .18275 | .18602 | .18311 | .17651 | .16813 |
| | .99343 | .97371 | .94120 | .8947 | .84623 | .79296 | .74306 | .69982 | .66416 | .63547 |

$$U/K + IV/K' \stackrel{-1}{\longrightarrow} U + IV = SN \quad (A+IB)$$

K-SIN 75

| β | $1/A = .10$ | $1/A = .20$ | $1/A = .30$ | $1/A = .40$ | $1/A = .50$ | $1/A = .60$ | $1/A = .70$ | $1/A = .80$ | $1/A = .90$ |
|---------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| .00 | .03753 1.00000 | .07586 1.00000 | .11590 1.00000 | .15880 1.00000 | .20624 1.00000 | .26091 1.00000 | .32767 1.00000 | .41867 1.00000 | .57591 1.00000 |
| .10 | .03753 .99935 | .07587 .99358 | .11578 .99358 | .15846 .98761 | .20539 .97825 | .25808 .96314 | .32273 .93697 | .40334 .86442 | .50436 .75302 |
| .20 | .03752 .99869 | .07573 .99460 | .11541 .98720 | .15744 .97539 | .20291 .95713 | .25308 .92851 | .30892 .88172 | .36643 .80158 | .41705 .66870 |
| .30 | .03750 .99804 | .07557 .99192 | .11480 .98090 | .15578 .96352 | .19895 .93719 | .24425 .89759 | .28994 .83615 | .33008 .75153 | .35326 .64064 |
| .40 | .03747 .99739 | .07534 .98926 | .11397 .97474 | .15352 .95215 | .19374 .91886 | .23333 .87126 | .26898 .80584 | .29450 .72304 | .30545 .63219 |
| .50 | .03744 .99674 | .07506 .98663 | .11292 .96873 | .15074 .94139 | .18756 .90240 | .22121 .84966 | .24809 .78313 | .26419 .70754 | .26795 .63228 |
| .60 | .03739 .99609 | .07471 .98603 | .11166 .96292 | .14750 .93135 | .18067 .88794 | .20861 .83248 | .22827 .76770 | .23750 .69995 | .23053 .63667 |
| .70 | .03734 .99544 | .07430 .96148 | .11021 .95734 | .14387 .92210 | .17332 .87548 | .19603 .81917 | .20994 .75769 | .21474 .6933 | .21217 .64341 |
| .80 | .03729 .99480 | .07384 .97897 | .10859 .95200 | .13995 .91366 | .16573 .86494 | .10380 .80915 | .19320 .75166 | .13478 .69795 | .19072 .65148 |
| .90 | .03722 .99416 | .07332 .97651 | .10682 .94694 | .13579 .90605 | .15807 .85618 | .17212 .80185 | .17800 .74857 | .17731 .73071 | .17231 .66029 |
| 1.00 | .03715 .99352 | .07275 .97411 | .10492 .94215 | .13148 .89926 | .15047 .84903 | .16109 .79677 | .16424 .74764 | .16194 .70490 | .15635 .66948 |

$U/K+IV/K'$
 $^{-1}$
 $U+IV=SN$ (A+IB)

K=SIN 80

| | | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 0.00 | .03231 | .06530 | .09972 | .13655 | .17718 | .222302 | .28056 | .35665 | .48273 | .60000 | .80000 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .03231 | .06527 | .09961 | .13626 | .17646 | .22211 | .27631 | .34422 | .42995 | .47875 | .49146 |
| | .99935 | .99733 | .99365 | .98777 | .97861 | .96396 | .93879 | .88945 | .77012 | .68178 | .51937 |
| .20 | .03230 | .06516 | .09930 | .13539 | .17435 | .21722 | .26483 | .31573 | .35887 | .36912 | |
| | .99670 | .99466 | .98735 | .97572 | .95783 | .92996 | .88485 | .80843 | .68178 | .51937 | |
| .30 | .03228 | .06505 | .09878 | .13397 | .17098 | .20577 | .24693 | .28375 | .30493 | .30541 | |
| | .99806 | .99201 | .98113 | .96401 | .93819 | .89956 | .84186 | .75828 | .65041 | .53905 | |
| .40 | .03226 | .06485 | .09807 | .13204 | .16655 | .20052 | .23126 | .25401 | .26399 | .26083 | |
| | .99741 | .98938 | .97503 | .95278 | .92011 | .87360 | .80988 | .72916 | .63991 | .55647 | |
| .50 | .03223 | .06460 | .09716 | .12966 | .16128 | .19023 | .21353 | .22783 | .23169 | .22689 | |
| | .99677 | .98677 | .96909 | .94216 | .90386 | .85222 | .78714 | .71300 | .63868 | .57279 | |
| .60 | .03219 | .06430 | .09606 | .12688 | .15540 | .17950 | .19663 | .20511 | .20540 | .19979 | |
| | .99613 | .98420 | .96335 | .93224 | .88957 | .83514 | .77157 | .70484 | .64215 | .58635 | |
| .70 | .03215 | .06395 | .09484 | .12378 | .14912 | .16876 | .18095 | .18539 | .18350 | .17750 | |
| | .99549 | .98167 | .95783 | .92309 | .87723 | .82187 | .76137 | .70177 | .64825 | .60329 | |
| .80 | .03210 | .06356 | .09345 | .12042 | .14263 | .15830 | .16659 | .16820 | .16494 | .15878 | |
| | .99485 | .97519 | .95255 | .91474 | .86677 | .81184 | .75515 | .70201 | .65584 | .61764 | |
| .90 | .03205 | .06311 | .09193 | .11686 | .13607 | .14829 | .15353 | .15344 | .14900 | .14282 | |
| | .99422 | .97676 | .94754 | .90720 | .85806 | .80450 | .75167 | .70445 | .66427 | .63142 | |
| 1.00 | .03199 | .06262 | .09030 | .11316 | .12956 | .13682 | .14168 | .13986 | .13510 | .12506 | |
| | .99356 | .97438 | .94281 | .90048 | .85094 | .79936 | .75070 | .70839 | .67316 | .64465 | |

$U/K + IV/K^*$
 -1
 $U+IV=SN \quad (A+IB)$

$K = \sin 85$

| | | $1/A = .10$ | $1/A = .20$ | $1/A = .30$ | $1/A = .40$ | $1/A = .50$ | $1/A = .60$ | $1/A = .70$ | $1/A = .80$ | $1/A = .90$ | $1/A = 1.00$ |
|------|---------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| 0.00 | .02629 | .05311 | .08110 | .11101 | .14396 | .18171 | .22746 | .28838 | .38734 | .1.00000 | .00000 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | | |
| .10 | .02628 | .05309 | .08101 | .11077 | .14338 | .18034 | .22408 | .27866 | .34767 | .39191 | .50981 |
| | .99336 | .99734 | .99370 | .98787 | .97881 | .96440 | .93981 | .89216 | .77503 | | |
| .20 | .02627 | .05302 | .08076 | .11007 | .14168 | .17641 | .21492 | .25616 | .29175 | .30180 | .52866 |
| | .99671 | .99469 | .98743 | .97591 | .95823 | .93079 | .88661 | .81223 | .68912 | | |
| .30 | .02626 | .05291 | .08034 | .10892 | .13896 | .170'1 | .20219 | .23062 | .24838 | .24960 | .54532 |
| | .99807 | .99206 | .98126 | .96429 | .93876 | .9069 | .84402 | .76210 | .65501 | | |
| .40 | .02624 | .05275 | .07975 | .10736 | .13538 | .16296 | .18798 | .20668 | .21520 | .21310 | .56126 |
| | .99743 | .90944 | .97520 | .95315 | .92084 | .87494 | .81218 | .73267 | .64438 | | |
| .50 | .02622 | .05255 | .07902 | .10543 | .13112 | .15466 | .17368 | .18551 | .18894 | .18532 | .57669 |
| | .99679 | .98685 | .96930 | .94260 | .9041 | .85369 | .78944 | .71616 | .64241 | | |
| .60 | .02619 | .05231 | .07814 | .10318 | .12636 | .14598 | .16001 | .16708 | .16753 | .16315 | .59168 |
| | .99615 | .98430 | .96360 | .93275 | .89050 | .83668 | .77380 | .70769 | .64537 | | |
| .70 | .02616 | .05202 | .07714 | .10066 | .12127 | .13729 | .14730 | .15106 | .14967 | .14492 | .60620 |
| | .99551 | .98179 | .95811 | .92366 | .87824 | .82344 | .76350 | .70435 | .65109 | | |
| .80 | .02612 | .05170 | .07601 | .09794 | .11601 | .12800 | .13564 | .13707 | .13453 | .12960 | .62025 |
| | .99488 | .97932 | .95287 | .91536 | .86783 | .81340 | .75717 | .70437 | .65839 | | |
| .90 | .02607 | .05134 | .07477 | .09505 | .11069 | .12068 | .12503 | .12480 | .12152 | .11655 | .63381 |
| | .99425 | .97690 | .94789 | .90787 | .85915 | .80604 | .75380 | .70664 | .66660 | | |
| 1.00 | .02602 | .05094 | .07345 | .09265 | .10541 | .11299 | .11540 | .11399 | .11024 | .10531 | .64685 |
| | .99362 | .97454 | .94319 | .90119 | .85205 | .80887 | .75261 | .71043 | .67532 | | |

$U/K + IV/K$
 -1
 $U + IV = SN \quad (A + IB)$

$K = \sin 66$

| B | $1/A = .10$ | $1/k = .20$ | $1/A = .30$ | $1/A = .40$ | $1/A = .50$ | $1/A = .60$ | $1/A = .70$ | $1/A = .80$ | $1/A = .90$ | $1/A = 1.00$ |
|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| 0.00 | .02482 | .05015 | .07657 | .10480 | .13591 | .17152 | .21468 | .27208 | .36515 | .40000 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| .10 | .02482 | .05013 | .07648 | .10458 | .13536 | .17023 | .21149 | .26295 | .32802 | .37026 |
| | .99936 | .99935 | .99370 | .98788 | .97884 | .96445 | .93992 | .89247 | .78004 | .51201 |
| .20 | .02481 | .05006 | .07624 | .10392 | .13375 | .16653 | .20286 | .24178 | .27543 | .28511 |
| | .99871 | .99470 | .98745 | .97594 | .95827 | .93089 | .88681 | .84267 | .66997 | .52976 |
| .30 | .02480 | .04995 | .07585 | .10263 | .13118 | .16087 | .19087 | .21772 | .25455 | .23578 |
| | .99807 | .99236 | .98127 | .96432 | .93883 | .90083 | .84428 | .76255 | .65667 | .54607 |
| .40 | .02478 | .04981 | .07530 | .10136 | .12761 | .15384 | .17747 | .19514 | .20323 | .20130 |
| | .99743 | .98945 | .97522 | .95319 | .92192 | .87509 | .81245 | .73308 | .64491 | .56182 |
| .50 | .02476 | .04962 | .07461 | .09953 | .12376 | .14601 | .16397 | .17517 | .17844 | .17505 |
| | .99679 | .98636 | .96933 | .94266 | .90481 | .85386 | .76971 | .71653 | .64285 | .57716 |
| .60 | .02473 | .04939 | .07378 | .09741 | .11929 | .13782 | .15108 | .15777 | .15822 | .15611 |
| | .99615 | .90434 | .96363 | .93282 | .89052 | .83686 | .77406 | .70802 | .64575 | .59207 |
| .70 | .02469 | .04912 | .07283 | .09504 | .11450 | .13962 | .15906 | .14265 | .14136 | .13664 |
| | .99552 | .98180 | .95815 | .92373 | .87836 | .82362 | .76375 | .70465 | .65142 | .60555 |
| .80 | .02466 | .04881 | .07176 | .09246 | .10953 | .12162 | .12808 | .12944 | .12706 | .12241 |
| | .99488 | .97933 | .95291 | .91544 | .86795 | .81359 | .75741 | .70465 | .65869 | .62057 |
| .90 | .02462 | .04847 | .07060 | .08974 | .10451 | .11395 | .11806 | .11786 | .11477 | .11009 |
| | .99425 | .97692 | .94793 | .90795 | .85928 | .80622 | .75403 | .70690 | .66688 | .63409 |
| 1.00 | .02457 | .04809 | .06934 | .08691 | .09952 | .10669 | .10897 | .10765 | .10412 | .09946 |
| | .99363 | .97456 | .94323 | .90127 | .85218 | .80105 | .75283 | .71067 | .67558 | .64712 |

$$U \leftarrow IV = SN^{-1} (A + IV)$$

X-SIN 87

| 9 | 1/A= .10 | 1/A= .20 | 1/A= .30 | 1/A= .40 | 1/A= .50 | 1/A= .60 | 1/A= .70 | 1/A= .80 | 1/A= .90 | 1/A= 1.00 | | | | |
|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|--|--|--|--|
| 0.00 | .02316 | .04679 | .07144 | .09779 | .12630 | .16002 | .20026 | .25374 | .34031 | .40000 | | | | |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | | | | |
| .10 | .02316 | .04677 | .07137 | .09752 | .12629 | .15881 | .19729 | .24525 | .30591 | .34565 | | | | |
| | .99936 | .99735 | .99371 | .98789 | .97866 | .96449 | .94002 | .89271 | .76082 | .51371 | | | | |
| .20 | .02315 | .04671 | .07114 | .09696 | .12479 | .15536 | .18925 | .22555 | .25690 | .26615 | | | | |
| | .99871 | .99476 | .93745 | .97595 | .95831 | .93096 | .88697 | .81301 | .69063 | .53062 | | | | |
| .30 | .02314 | .04661 | .07077 | .09595 | .12240 | .15009 | .17807 | .20314 | .21888 | .22010 | | | | |
| | .99807 | .99207 | .98128 | .96435 | .93886 | .90093 | .84447 | .76289 | .65718 | .54565 | | | | |
| .40 | .02312 | .04647 | .07026 | .09457 | .11925 | .14354 | .16559 | .18209 | .18967 | .18790 | | | | |
| | .99743 | .98946 | .97524 | .95323 | .92099 | .87522 | .81266 | .73346 | .64532 | .56227 | | | | |
| .50 | .02310 | .04630 | .06961 | .09287 | .11550 | .13623 | .15300 | .16346 | .16654 | .16340 | | | | |
| | .99679 | .98687 | .96935 | .94270 | .90469 | .85399 | .78992 | .71682 | .64319 | .57752 | | | | |
| .60 | .02307 | .04608 | .06884 | .09089 | .11131 | .12860 | .14097 | .14724 | .14767 | .14385 | | | | |
| | .99615 | .98432 | .96365 | .93286 | .89670 | .83700 | .77427 | .70626 | .64605 | .59238 | | | | |
| .70 | .02304 | .04583 | .06795 | .08868 | .10684 | .12095 | .12978 | .13312 | .13193 | .12777 | | | | |
| | .99552 | .98181 | .95817 | .92378 | .87845 | .82377 | .76395 | .70489 | .65169 | .60682 | | | | |
| .80 | .02301 | .04555 | .06696 | .08628 | .10220 | .11348 | .11952 | .12080 | .11859 | .11426 | | | | |
| | .99489 | .97934 | .95294 | .91550 | .86805 | .81373 | .75760 | .70487 | .65893 | .62081 | | | | |
| .90 | .02297 | .04523 | .06587 | .08375 | .09752 | .10633 | .11017 | .10999 | .10712 | .10275 | | | | |
| | .99426 | .97893 | .94796 | .90802 | .85938 | .80637 | .75420 | .70711 | .66710 | .63432 | | | | |
| 1.00 | .02292 | .04487 | .06470 | .08109 | .09287 | .09956 | .10169 | .10046 | .9717 | .9283 | | | | |
| | .99362 | .97457 | .94327 | .90133 | .85229 | .80119 | .75300 | .71086 | .67578 | .64732 | | | | |

$U/K+IV/K'$
 -1
 $J+IV=SN \quad (A+IB)$

K=SIN 66

| B | 1/A = .10 | 1/A = .20 | = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|-------|-----------|-----------|---------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 0.0 0 | .02117 | .04277 | .06530 | .08938 | .11590 | .14525 | .18301 | .23186 | .31082 | .40000 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | .00000 |
| .1 0 | .02117 | .04275 | .06523 | .08863 | .11543 | .14515 | .18030 | .22412 | .27952 | .31607 |
| | .99936 | .99735 | .99371 | .98790 | .97687 | .96452 | .94008 | .89288 | .76137 | .51493 |
| .2 0 | .02116 | .04270 | .06503 | .08846 | .11406 | .14200 | .17297 | .20614 | .23490 | .26336 |
| | .99871 | .99670 | .98746 | .97597 | .95834 | .93101 | .80708 | .61325 | .69111 | .53324 |
| .3 0 | .02115 | .04261 | .06469 | .08770 | .11188 | .13719 | .16276 | .18567 | .20009 | .20125 |
| | .99807 | .99207 | .98129 | .96437 | .93692 | .90108 | .84461 | .76314 | .65755 | .54706 |
| .4 0 | .02113 | .04218 | .06422 | .08644 | .10900 | .13120 | .15135 | .16645 | .17340 | .17161 |
| | .99743 | .98946 | .97525 | .95325 | .92104 | .87530 | .81281 | .73363 | .64562 | .56256 |
| .5 0 | .02111 | .04232 | .06363 | .08489 | .10557 | .12453 | .13986 | .16943 | .19226 | .19461 |
| | .99679 | .98688 | .96936 | .94273 | .90494 | .85409 | .79607 | .71702 | .64343 | .57777 |
| .6 0 | .02109 | .04212 | .06293 | .08308 | .10175 | .11755 | .12087 | .13460 | .13501 | .13153 |
| | .99616 | .98433 | .96367 | .93290 | .89076 | .83710 | .77441 | .70847 | .64626 | .59260 |
| .7 0 | .02106 | .04189 | .06212 | .08106 | .09766 | .11056 | .11864 | .12170 | .12062 | .11682 |
| | .99552 | .98182 | .95619 | .92382 | .87871 | .82387 | .76409 | .70506 | .65187 | .60701 |
| .8 0 | .02103 | .04163 | .06121 | .07986 | .09342 | .10374 | .10926 | .11044 | .10842 | .10447 |
| | .99489 | .97935 | .95296 | .91554 | .86812 | .81383 | .75773 | .70503 | .65909 | .62096 |
| .9 0 | .02100 | .04134 | .06021 | .07654 | .08914 | .09721 | .10072 | .10056 | .09793 | .09394 |
| | .99426 | .97594 | .94799 | .90806 | .85945 | .80647 | .75433 | .70725 | .66725 | .63447 |
| 1.0 0 | .02096 | .04102 | .05915 | .07412 | .08489 | .09104 | .09296 | .09185 | .08864 | .08628 |
| | .99363 | .97458 | .94329 | .90138 | .85236 | .80129 | .75312 | .71100 | .67592 | .64747 |

$U/K + IV/K$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 69

| B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|
| 0.00 | .01046 2.00000 | .03731 1.00000 | .05596 1.00000 | .07796 1.00000 | .10109 1.00000 | .12756 1.00000 | .15961 1.00000 | .20219 1.00000 | .27097 1.00000 | .40000 .00000 |
| .10 | .01046 .99936 | .03729 .99371 | .05590 .98790 | .07700 .97888 | .10063 .95453 | .12660 .94012 | .15725 .89298 | .19545 .89298 | .24375 .78170 | .27574 .51566 |
| .20 | .01046 .99971 | .03724 .99470 | .05572 .98746 | .07730 .97597 | .09949 .95835 | .12385 .93104 | .15086 .88715 | .17978 .81340 | .20468 .69139 | .22231 .53160 |
| .30 | .01045 .95807 | .03716 .99207 | .05642 .98130 | .07643 .96438 | .09758 .93894 | .11965 .90105 | .14196 .84463 | .16195 .76329 | .17454 .65777 | .17557 .54731 |
| .40 | .01043 .99743 | .03705 .98946 | .05602 .97526 | .07540 .95326 | .09507 .92106 | .11443 .87535 | .13201 .81290 | .14519 .73377 | .15126 .64579 | .14986 .56277 |
| .50 | .01042 .99679 | .03691 .98686 | .05550 .96937 | .07404 .94275 | .09208 .90497 | .10261 .85415 | .12199 .79016 | .13034 .71715 | .13282 .64358 | .13034 .57793 |
| .60 | .01040 .99616 | .03674 .96433 | .05489 .96365 | .07247 .93292 | .08871 .89030 | .10253 .85316 | .11240 .77450 | .11741 .70858 | .11777 .64639 | .1474 .59273 |
| .70 | .01037 .99552 | .03654 .98182 | .05418 .95820 | .07070 .92384 | .08610 .87895 | .09643 .82293 | .10349 .76417 | .10616 .70516 | .10522 .65198 | .10191 .60713 |
| .80 | .01034 .99489 | .03634 .97936 | .05339 .95297 | .06879 .91556 | .08149 .86216 | .09043 .81390 | .09531 .75781 | .09634 .70512 | .09458 .65920 | .09113 .62108 |
| .90 | .01031 .99425 | .03606 .97646 | .05252 .94600 | .06675 .90809 | .07775 .85950 | .08776 .80653 | .08785 .75441 | .08772 .70734 | .08543 .66734 | .08195 .63457 |
| 1.00 | .01029 .99363 | .03578 .97159 | .05159 .94331 | .05465 .90141 | .07406 .85240 | .07938 .80135 | .08109 .75319 | .08112 .71408 | .07750 .67601 | .07404 .64755 |

$U/K + IV/K$
 -1
 $J+IV=SN$ ($\lambda + IB$)

$K = \sin E$

| E | $1/A = .01$ | $1/A = .02$ | $1/A = .03$ | $1/A = .04$ | $1/A = .05$ | $1/A = .06$ | $1/A = .07$ | $1/A = .08$ | $1/A = .09$ | $1/A = .10$ |
|-----|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| .01 | .03641 | .02905 | .02176 | .01706 | .01334 | .01117 | .01014 | .00892 | .00795 | .00717 |
| | .96501 | .97605 | .97308 | .97186 | .97126 | .97092 | .97071 | .97058 | .97048 | .97041 |
| .02 | .05834 | .07258 | .06657 | .05743 | .04935 | .04281 | .03709 | .03354 | .03017 | .02738 |
| | .98798 | .96993 | .95849 | .95216 | .94855 | .94636 | .94495 | .94399 | .94332 | .94292 |
| .03 | .06569 | .10072 | .10824 | .10290 | .09330 | .08452 | .07616 | .06892 | .06273 | .05744 |
| | .99097 | .97215 | .95465 | .94222 | .93393 | .92840 | .92462 | .92195 | .92002 | .91858 |
| .04 | .06473 | .11680 | .13912 | .14312 | .13779 | .12887 | .11914 | .10980 | .10127 | .09365 |
| | .99291 | .97567 | .95603 | .93911 | .92620 | .91677 | .90990 | .90486 | .90109 | .89822 |
| .05 | .07023 | .12612 | .16058 | .17539 | .17639 | .17111 | .16216 | .15216 | .14223 | .13287 |
| | .99421 | .97896 | .95923 | .93380 | .92324 | .91011 | .90000 | .89226 | .88630 | .88166 |
| .06 | .07107 | .13185 | .17543 | .20135 | .20992 | .20923 | .20275 | .19347 | .18317 | .17280 |
| | .99511 | .98165 | .96277 | .94230 | .92324 | .90702 | .89385 | .88337 | .87507 | .86348 |
| .07 | .07159 | .13559 | .18598 | .23448 | .23718 | .24254 | .23979 | .23237 | .22211 | .21192 |
| | .99576 | .98382 | .96612 | .94554 | .92435 | .90632 | .89046 | .87739 | .86677 | .85817 |
| .08 | .07193 | .13211 | .19340 | .23418 | .25950 | .27126 | .27239 | .26824 | .25978 | .24944 |
| | .99529 | .98557 | .96911 | .94994 | .92777 | .90711 | .88904 | .87362 | .86078 | .85020 |
| .09 | .07217 | .13991 | .19894 | .24559 | .27776 | .29587 | .30247 | .30095 | .29433 | .28481 |
| | .99669 | .98701 | .97172 | .95225 | .93062 | .90891 | .86900 | .87149 | .85659 | .84111 |
| .10 | .07234 | .14123 | .20312 | .25454 | .29276 | .31693 | .32855 | .33059 | .32619 | .31787 |
| | .99702 | .98813 | .97399 | .95534 | .93371 | .91131 | .88991 | .87056 | .85378 | .83951 |

$U/K + IV/K'$
 $\frac{-1}{1}$
 $I+IV = SN$ (A+18)

K=SIN 10

| | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| .01 | .01519 | .01454 | .01090 | .00355 | .00639 | .00589 | .00509 | .00447 | .00399 | .00360 |
| | .99087 | .98539 | .98357 | .98262 | .98245 | .98224 | .98211 | .98203 | .98197 | .98193 |
| .02 | .02911 | .03634 | .03349 | .02899 | .02497 | .02171 | .01911 | .01702 | .01532 | .01391 |
| | .99259 | .98172 | .97470 | .97079 | .96551 | .96177 | .96228 | .96168 | .96526 | .6495 |
| .03 | .03275 | .05036 | .05443 | .05212 | .04730 | .04327 | .03912 | .03549 | .03236 | .02967 |
| | .99451 | .98310 | .97254 | .96489 | .95971 | .95621 | .95379 | .95208 | .95083 | .94990 |
| .04 | .03426 | .05623 | .06975 | .07243 | .07042 | .06642 | .06163 | .05729 | .05307 | .04924 |
| | .99570 | .98533 | .97357 | .96331 | .95332 | .94935 | .94494 | .94165 | .93916 | .93725 |
| .05 | .03500 | .06278 | .08323 | .08445 | .09030 | .08645 | .08470 | .08020 | .07553 | .07098 |
| | .99648 | .98734 | .97565 | .96408 | .95403 | .94583 | .93935 | .93427 | .93029 | .92714 |
| .06 | .03542 | .06557 | .08739 | .10059 | .10576 | .10803 | .10618 | .10263 | .09824 | .09354 |
| | .99701 | .98098 | .97789 | .96591 | .95458 | .94467 | .93634 | .92951 | .92394 | .91941 |
| .07 | .03567 | .06737 | .09236 | .10971 | .12002 | .12471 | .12364 | .12020 | .11590 | |
| | .99744 | .99030 | .97996 | .96809 | .95614 | .94501 | .93522 | .92681 | .91972 | .91379 |
| .08 | .03514 | .06260 | .09591 | .11658 | .13761 | .13882 | .14246 | .14080 | .13740 | |
| | .99775 | .99135 | .98178 | .97031 | .95817 | .94633 | .93541 | .92569 | .91722 | .90995 |
| .09 | .03596 | .06846 | .09850 | .12183 | .13905 | .15051 | .15713 | .15986 | .15974 | .15763 |
| | .99799 | .99222 | .98336 | .97240 | .96036 | .94815 | .93646 | .92569 | .91605 | .90755 |
| .10 | .03604 | .07010 | .10045 | .12589 | .14582 | .16026 | .16972 | .17498 | .17693 | .17639 |
| | .99813 | .99293 | .98473 | .97432 | .96254 | .95022 | .93805 | .92650 | .91567 | .90630 |

$$U/K+IV/X^*$$

$$U + IV = S \oplus N$$

K = SIN 15

| $1/B$ | $1/A = .01$ | $1/A = .02$ | $1/A = .03$ | $1/A = .04$ | $1/A = .05$ | $1/A = .06$ | $1/A = .07$ | $1/A = .08$ | $1/A = .09$ |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| .01 | .01209 | .00967 | .00725 | .00560 | .00465 | .00392 | .00338 | .00297 | .00265 |
| | .99302 | .98883 | .98744 | .98687 | .98658 | .98642 | .98632 | .98626 | .98618 |
| .02 | .01934 | .02416 | .02229 | .01930 | .01664 | .01447 | .01274 | .01135 | .01021 |
| | .99441 | .98603 | .98057 | .97767 | .97594 | .97489 | .97421 | .97375 | .97318 |
| .03 | .02176 | .03347 | .03622 | .03473 | .03189 | .02869 | .02613 | .02372 | .02164 |
| | .99581 | .98710 | .97904 | .97318 | .96921 | .96651 | .96465 | .96333 | .96236 |
| .04 | .02276 | .03869 | .04639 | .04825 | .04700 | .04440 | .04139 | .03839 | .03559 |
| | .99671 | .98861 | .97985 | .97202 | .96591 | .96132 | .95791 | .95537 | .95343 |
| .05 | .02325 | .04170 | .05332 | .05888 | .06024 | .05913 | .05676 | .05384 | .05079 |
| | .99731 | .99035 | .98146 | .97266 | .96499 | .95871 | .95372 | .94979 | .94669 |
| .06 | .02353 | .04354 | .05804 | .06690 | .07116 | .07218 | .07116 | .06896 | .06617 |
| | .99773 | .99160 | .98316 | .97410 | .96549 | .95793 | .95154 | .94626 | .94194 |
| .07 | .02370 | .04473 | .06132 | .07290 | .07991 | .08329 | .08406 | .08306 | .08102 |
| | .99804 | .99261 | .98477 | .97579 | .96675 | .95832 | .95083 | .94437 | .93036 |
| .08 | .02381 | .04554 | .06365 | .07741 | .08687 | .09258 | .09532 | .09587 | .09490 |
| | .99828 | .99341 | .98616 | .97750 | .96835 | .95942 | .95113 | .94370 | .93718 |
| .09 | .02389 | .04611 | .06536 | .08085 | .09239 | .10026 | .10499 | .10723 | .10759 |
| | .99847 | .99407 | .98737 | .97911 | .97006 | .96089 | .95208 | .94391 | .93653 |
| .10 | .02394 | .04653 | .06664 | .08350 | .09680 | .10660 | .11324 | .11721 | .11904 |
| | .99862 | .99462 | .98841 | .98057 | .97175 | .96254 | .95342 | .94472 | .93666 |

$$U/K + IV/K^2$$

$$U + IV = SN \quad (A + IB)^{-1}$$

K=SIN 20

| | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| .01 | *.00902 | *.00722 | *.00541 | *.00424 | *.00347 | *.00293 | *.00253 | *.00222 | *.00198 | *.00179 |
| | *.99416 | *.99066 | *.98949 | *.98901 | *.98878 | *.98864 | *.98856 | *.98851 | *.98847 | *.98844 |
| .02 | *.01444 | *.01604 | *.01665 | *.01442 | *.01243 | *.01018 | *.00952 | *.00848 | *.00763 | *.00693 |
| | *.99533 | *.96632 | *.96383 | *.96132 | *.97988 | *.97899 | *.97842 | *.97804 | *.97776 | *.97756 |
| .03 | *.01624 | *.02499 | *.02705 | *.02595 | *.02384 | *.02160 | *.01955 | *.01774 | *.01619 | *.01465 |
| | *.99650 | *.96922 | *.96246 | *.97558 | *.97425 | *.97199 | *.97043 | *.96932 | *.96850 | *.96790 |
| .04 | *.01699 | *.02888 | *.03605 | *.03514 | *.03322 | *.03098 | *.02875 | *.02666 | *.02476 | |
| | *.99725 | *.99065 | *.98317 | *.97662 | *.97150 | *.96766 | *.96420 | *.96266 | *.96103 | *.95976 |
| .05 | *.01736 | *.03142 | *.03981 | *.04398 | *.04503 | *.04424 | *.04250 | *.04034 | *.03807 | *.03584 |
| | *.99775 | *.99194 | *.98452 | *.97117 | *.97076 | *.96550 | *.96131 | *.95801 | *.95541 | *.95333 |
| .06 | *.01756 | *.03250 | *.04332 | *.04996 | *.05316 | *.05399 | *.05328 | *.05168 | *.04963 | *.04738 |
| | *.99811 | *.99299 | *.98596 | *.97838 | *.97120 | *.96488 | *.95953 | *.95510 | *.95147 | *.94849 |
| .07 | *.01769 | *.03339 | *.04576 | *.05442 | *.05970 | *.05228 | *.06292 | *.06226 | *.06078 | *.0583 |
| | *.99036 | *.99382 | *.98728 | *.97981 | *.97227 | *.95896 | *.95524 | *.95357 | *.94893 | *.94507 |
| .08 | *.01777 | *.03399 | *.04750 | *.05778 | *.06487 | *.06919 | *.07432 | *.07162 | *.07149 | *.06980 |
| | *.99856 | *.99450 | *.98845 | *.98124 | *.97363 | *.96619 | *.95928 | *.95307 | *.94761 | *.94286 |
| .09 | *.01783 | *.03441 | *.04877 | *.06033 | *.06897 | *.07490 | *.07852 | *.08030 | *.08068 | *.08006 |
| | *.99872 | *.99505 | *.98945 | *.98258 | *.97506 | *.96744 | *.96011 | *.95330 | *.94713 | *.94163 |
| .10 | *.01787 | *.03473 | *.04972 | *.06230 | *.07224 | *.07960 | *.08464 | *.08772 | *.08922 | *.08951 |
| | *.99884 | *.99550 | *.99033 | *.98381 | *.97649 | *.96884 | *.96127 | *.95404 | *.94731 | *.94117 |

$V/K + IV/K$
 $U+IV=SN^{-1}$
 $(A+IB)$

K=SIN 25

| | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|-----------|
| .01 | .00717 .99486 | .00574 .99180 | .00430 .99078 | .00338 .99035 | .00276 .99015 | .00233 .99003 | .00201 .98991 | .00177 .98988 | .00157 .98985 | .00142 |
| .02 | .01148 .99590 | .01435 .98975 | .01324 .98581 | .01147 .98360 | .00985 .98233 | .00860 .98156 | .00757 .9805 | .00674 .98071 | .00607 .98047 | .00551 |
| .03 | .01292 .99692 | .01987 .99053 | .02151 .98462 | .02064 .98032 | .01696 .97739 | .01719 .97541 | .01556 .97403 | .01412 .97306 | .01288 .97234 | .01182 |
| .04 | .01351 .99759 | .02296 .99179 | .02754 .98523 | .02867 .97948 | .02796 .97499 | .02643 .97161 | .02466 .96910 | .02249 .96721 | .02123 .96578 | .01972 |
| .05 | .01360 .99803 | .02474 .99293 | .03165 .98642 | .03498 .97997 | .03582 .97434 | .03521 .96973 | .03383 .96605 | .03213 .96314 | .03033 .96085 | .02856 |
| .06 | .01396 .99834 | .02563 .99384 | .03444 .98768 | .03973 .98104 | .04230 .97474 | .04296 .96919 | .04241 .96450 | .04116 .956160 | .03954 .95740 | .03777 |
| .07 | .01406 .99856 | .02654 .99458 | .03638 .98885 | .04327 .98229 | .04748 .97569 | .04955 .96953 | .05009 .96403 | .0459 .95926 | .04643 .95523 | .04690 |
| .08 | .01413 .99874 | .02702 .99517 | .03776 .98987 | .04593 .98355 | .05158 .97686 | .05504 .97037 | .05676 .96431 | .05719 .95886 | .05672 .95406 | .05565 |
| .09 | .01418 .99887 | .02736 .99565 | .03876 .99075 | .04795 .98473 | .05483 .97815 | .05957 .97148 | .06248 .96506 | .06393 .95909 | .06428 .95368 | .06383 |
| .10 | .01421 .99898 | .02760 .99605 | .03952 .99152 | .04951 .98581 | .05742 .97940 | .06229 .97272 | .06733 .96609 | .06982 .95976 | .07107 .95386 | .07135 |

$U/K+JV/K^*$
 -1
 $U+IV=SN \quad (A+IB)$

| K=SIN 30 | | | | | | | | | | |
|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | | | | | | | | | |
| | | | | | | | | | | |
| 1/6 | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
| .01 | .00593 | .00474 | .00356 | .00279 | .00226 | .00192 | .00166 | .00146 | .00130 | .00117 |
| | .99536 | .99256 | .99165 | .99127 | .99106 | .99098 | .99091 | .99087 | .99084 | .99082 |
| .02 | .00949 | .01186 | .01095 | .00949 | .00816 | .00711 | .00626 | .00558 | .00502 | .00456 |
| | .99829 | .99072 | .98716 | .98516 | .98461 | .98331 | .98286 | .98255 | .98233 | .98217 |
| .03 | .01068 | .01643 | .01779 | .01707 | .01569 | .01422 | .01267 | .01166 | .01066 | .00978 |
| | .99722 | .99144 | .98608 | .98219 | .97954 | .97774 | .97650 | .97562 | .97497 | .97449 |
| .04 | .01117 | .01898 | .02277 | .02371 | .02312 | .02187 | .02040 | .01894 | .01757 | .01632 |
| | .99762 | .99256 | .98664 | .98144 | .9737 | .97431 | .97204 | .97033 | .96903 | .96804 |
| .05 | .01141 | .02046 | .02617 | .02892 | .02963 | .02913 | .02789 | .02659 | .02510 | .02364 |
| | .99822 | .99360 | .98771 | .98168 | .97679 | .97261 | .96928 | .96665 | .96457 | .96292 |
| .06 | .01154 | .02136 | .02646 | .03285 | .03498 | .03554 | .03509 | .03407 | .03223 | .03127 |
| | .99850 | .99443 | .98686 | .98205 | .97716 | .97214 | .96788 | .96436 | .96146 | .95908 |
| .07 | .01163 | .02154 | .03008 | .03578 | .03926 | .04099 | .04114 | .04104 | .04009 | .03884 |
| | .99870 | .99510 | .98991 | .98399 | .97802 | .97244 | .96747 | .96317 | .95950 | .95639 |
| .08 | .01168 | .02234 | .03121 | .03797 | .04265 | .04552 | .04698 | .04733 | .04608 | .04608 |
| | .99886 | .99563 | .99084 | .98513 | .97910 | .97321 | .96773 | .96280 | .95846 | .95468 |
| .09 | .01172 | .02262 | .03205 | .03964 | .04533 | .04926 | .05168 | .05290 | .05321 | .05285 |
| | .99898 | .99607 | .99164 | .98620 | .98025 | .97422 | .96842 | .96302 | .95813 | .95375 |
| .10 | .01175 | .02282 | .03267 | .04093 | .04747 | .05233 | .05569 | .05777 | .05882 | .05907 |
| | .99908 | .99643 | .99233 | .98717 | .98136 | .97535 | .96936 | .96364 | .95831 | .95344 |

$U/K + IV/K^*$
 -1
 $U+IV = SW \quad (A+IB)$

K=SIN 35

| | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| .01 | .00504 | .00403 | .00302 | .00237 | .00194 | .00163 | .00141 | .00124 | .00111 | .00100 |
| | .99572 | .99315 | .99229 | .99194 | .99176 | .99166 | .99160 | .99156 | .99154 | .99152 |
| .02 | .00806 | .01007 | .00929 | .00805 | .00694 | .00604 | .00532 | .00474 | .00426 | .00387 |
| | .99657 | .99143 | .98814 | .98629 | .98523 | .98458 | .98416 | .98367 | .98367 | .98353 |
| .03 | .00906 | .01394 | .01510 | .01449 | .01332 | .01207 | .01093 | .00992 | .00905 | .00830 |
| | .99743 | .99209 | .98714 | .98355 | .98110 | .97944 | .97829 | .97747 | .97667 | .97643 |
| .04 | .00948 | .01611 | .01933 | .02013 | .01963 | .01857 | .01732 | .01608 | .01492 | .01306 |
| | .99798 | .99314 | .98765 | .98285 | .97909 | .97627 | .97416 | .97259 | .97139 | .97047 |
| .05 | .00968 | .01736 | .02221 | .02455 | .02515 | .02473 | .02377 | .02258 | .02132 | .02008 |
| | .99835 | .99409 | .98865 | .98327 | .97856 | .97470 | .97162 | .96919 | .96726 | .96574 |
| .06 | .00980 | .01813 | .02417 | .02788 | .02970 | .03017 | .02980 | .02893 | .02780 | .02657 |
| | .99861 | .99486 | .98971 | .98416 | .97890 | .97426 | .97033 | .96707 | .96439 | .96219 |
| .07 | .00987 | .01862 | .02553 | .03037 | .03333 | .03460 | .03519 | .03485 | .03406 | .03299 |
| | .99880 | .99547 | .99068 | .98521 | .97970 | .97455 | .96996 | .96598 | .96259 | .95972 |
| .08 | .00992 | .01896 | .02649 | .03223 | .03620 | .03864 | .03987 | .04019 | .03980 | .03915 |
| | .99895 | .99596 | .99154 | .98626 | .98070 | .97526 | .97021 | .96565 | .96164 | .95814 |
| .09 | .00995 | .01920 | .02720 | .03365 | .03848 | .04181 | .04388 | .04492 | .04519 | .04490 |
| | .99905 | .99637 | .99228 | .98725 | .98176 | .97620 | .97084 | .96586 | .96134 | .95729 |
| .10 | .00997 | .01937 | .02773 | .03474 | .04029 | .04442 | .04728 | .04905 | .04995 | .05018 |
| | .99915 | .99670 | .99291 | .98815 | .98281 | .97724 | .97172 | .96644 | .96152 | .95701 |

U/K+IV/K'
 \cdot^{-1}
U+IV=SN (A+IB)

K=SIN⁻¹40

| | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .01 | .00435 .99598 | .00348 .99357 | .00261 .99277 | .00205 .99244 | .00167 .99227 | .00141 .99218 | .00122 .99212 | .00107 .99209 | .00096 .99206 | .00086 .99204 |
| .02 | .00597 .99678 | .00871 .99196 | .00803 .98887 | .00696 .98714 | .00600 .98614 | .00522 .98553 | .00460 .98514 | .00409 .98467 | .00369 .98466 | .00335 .98455 |
| .03 | .00784 .92759 | .01206 .99253 | .01306 .98794 | .01253 .98457 | .01252 .98227 | .01044 .98071 | .00945 .97953 | .00858 .97857 | .00783 .97830 | .00716 .97789 |
| .04 | .00820 .99811 | .01393 .99357 | .01671 .98842 | .01741 .95392 | .01698 .98039 | .01606 .97774 | .01498 .97576 | .01391 .97428 | .01290 .97316 | .01199 .97229 |
| .05 | .00837 .99845 | .01501 .99445 | .01921 .96935 | .02123 .98430 | .02175 .97989 | .02139 .97627 | .02056 .97338 | .01953 .97110 | .01844 .96929 | .01737 .96786 |
| .06 | .00847 .99870 | .01567 .99517 | .02090 .99035 | .02411 .98514 | .02568 .98021 | .02609 .97586 | .02577 .97218 | .02502 .96912 | .02405 .96660 | .02298 .96454 |
| .07 | .00853 .99887 | .01610 .99575 | .02207 .99126 | .02625 .98613 | .02682 .98096 | .03009 .97613 | .03043 .97183 | .03014 .96810 | .02946 .96491 | .02854 .96222 |
| .08 | .00857 .99901 | .01639 .99622 | .02291 .99206 | .02787 .98712 | .03130 .98190 | .03342 .97680 | .03448 .97206 | .03476 .96779 | .03450 .96402 | .03387 .96074 |
| .09 | .00860 .99912 | .01660 .99659 | .02352 .99276 | .02939 .99805 | .03327 .98290 | .03616 .97769 | .03794 .9756 | .03885 .96799 | .03909 .96375 | .03864 .95995 |
| .10 | .00862 .99920 | .01675 .99691 | .02397 .99336 | .03003 .96889 | .03484 .96388 | .03841 .97348 | .04068 .96653 | .04242 .96392 | .04321 .95970 | .04341 .95970 |

$U/K + IV/K'$
 -1
 $U + IV = SN \quad (A + IB)$

K=SIN 45

| | 1/B | 1/A= .01 | 1/A= .02 | 1/A= .03 | 1/A= .04 | 1/A= .05 | 1/A= .06 | 1/A= .07 | 1/A= .08 | 1/A= .09 | 1/A= .10 |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|
| .01 | .00381 .99619 | .00305 .99390 | .00229 .99314 | .00179 .99282 | .00147 .99267 | .00124 .99258 | .00107 .99253 | .00094 .99249 | .00084 .99247 | .00076 .99245 | |
| .02 | .00610 .99695 | .00763 .99237 | .00704 .98944 | .00610 .98780 | .00526 .98695 | .00457 .98627 | .00403 .98590 | .00359 .98564 | .00323 .98546 | .00293 .98533 | |
| .03 | .00687 .99771 | .01056 .99296 | .01144 .98856 | .01098 .98535 | .01009 .98317 | .00915 .98170 | .00828 .98067 | .00752 .97994 | .00686 .97941 | .00629 .97901 | |
| .04 | .00716 .99821 | .01220 .99390 | .01464 .98901 | .01525 .98474 | .01487 .98139 | .01407 .97887 | .01313 .97700 | .01219 .97559 | .01131 .97453 | .01050 .97371 | |
| .05 | .00733 .99853 | .01315 .99474 | .01683 .98990 | .01860 .98511 | .01906 .98092 | .01874 .97748 | .01601 .97474 | .01711 .97257 | .01616 .97086 | .01522 .96950 | |
| .06 | .00742 .99876 | .01373 .99542 | .01831 .99084 | .02112 .98590 | .02250 .98122 | .02286 .97710 | .02258 .97360 | .02193 .97070 | .02108 .96831 | .02014 .96635 | |
| .07 | .00746 .99893 | .01411 .99597 | .01933 .99171 | .02300 .98684 | .02525 .98194 | .02636 .97736 | .02666 .97327 | .02641 .96973 | .02582 .96671 | .02501 .96415 | |
| .08 | .00751 .99906 | .01436 .99641 | .02007 .99247 | .02441 .98778 | .02742 .98283 | .02924 .97799 | .03021 .97349 | .03046 .96944 | .03023 .96587 | .02968 .96275 | |
| .09 | .00753 .99916 | .01454 .99677 | .02060 .99313 | .02548 .98866 | .02914 .98376 | .03167 .97883 | .03324 .97407 | .03404 .96963 | .03425 .96561 | .03404 .96201 | |
| .10 | .00755 .99924 | .01467 .99706 | .02100 .99370 | .02631 .98946 | .03052 .98471 | .03365 .97976 | .03582 .97485 | .03717 .97015 | .03786 .96577 | .03804 .96177 | |

$U/K + IV/K'$
 -1
 $U + IV - SN \quad (A+18)$

K=SIN 50

| | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .01 | .00337 .99635 | .00270 .99416 | .00202 .99342 | .00159 .99312 | .00130 .99298 | .00119 .99281 | .00094 .99281 | .00083 .99278 | .00074 .99278 | .00067 .99277 |
| .02 | .00540 .99708 | .00674 .99269 | .00622 .98988 | .00539 .98831 | .00465 .98740 | .00404 .98685 | .00356 .98649 | .00317 .98625 | .00286 .98598 | .00259 .98595 |
| .03 | .00697 .99761 | .00934 .99325 | .01011 .98904 | .00971 .98904 | .00892 .98360 | .00809 .98247 | .00732 .98149 | .00665 .98079 | .00605 .98020 | .00556 .97990 |
| .04 | .00635 .99828 | .01079 .99415 | .01295 .98948 | .01348 .90538 | .01315 .98218 | .01244 .97977 | .01161 .97797 | .01176 .97662 | .01000 .97560 | .00929 .97481 |
| .05 | .00649 .99859 | .01163 .99496 | .01488 .96032 | .01645 .98574 | .01685 .98172 | .01657 .97841 | .01593 .97581 | .01513 .97373 | .01429 .97209 | .01346 .97078 |
| .06 | .00656 .99862 | .01214 .99561 | .01619 .99123 | .01367 .58650 | .01989 .98202 | .02022 .97806 | .01997 .97471 | .01939 .97193 | .01864 .96954 | .01781 .96777 |
| .07 | .00661 .99898 | .01247 .99614 | .01710 .99206 | .02034 .98740 | .02232 .98270 | .02331 .97831 | .02358 .97440 | .02336 .97101 | .02283 .96811 | .02212 .96566 |
| .08 | .00664 .99910 | .01270 .99656 | .01774 .99279 | .02158 .98830 | .02425 .98356 | .02589 .97892 | .02671 .97462 | .02694 .97073 | .02674 .96731 | .02625 .96433 |
| .09 | .00666 .39920 | .01286 .99690 | .01821 .99342 | .02253 .98914 | .02577 .98446 | .02801 .97973 | .02939 .97517 | .03010 .97092 | .03029 .96706 | .03011 .96361 |
| .10 | .00668 .99928 | .01297 .99719 | .01657 .99396 | .02326 .98991 | .02698 .98536 | .02975 .98062 | .03167 .97591 | .03287 .97142 | .03348 .96723 | .03365 .96339 |

$U/K+IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 55

| 1/A | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| .01 | .00200 | .00240 | .00180 | .00141 | .00115 | .00097 | .00084 | .00074 | .00066 | .00059 |
| | .99647 | .99436 | .99365 | .99336 | .99322 | .99314 | .99309 | .99306 | .99303 | .99302 |
| .02 | .00480 | .00600 | .00554 | .00480 | .00414 | .00360 | .00317 | .00282 | .00254 | .00231 |
| | .99718 | .99295 | .99024 | .98872 | .98784 | .98732 | .98696 | .98673 | .98556 | .98444 |
| .03 | .00540 | .00631 | .00900 | .00364 | .00794 | .00719 | .00651 | .00591 | .00540 | .00485 |
| | .99788 | .99349 | .98942 | .98646 | .98445 | .98308 | .98213 | .98146 | .98096 | .96060 |
| .04 | .00565 | .00960 | .01152 | .01203 | .01179 | .01107 | .01033 | .00959 | .00890 | .00826 |
| | .99634 | .99436 | .98984 | .98589 | .98280 | .98047 | .97874 | .97744 | .97645 | .97562 |
| .05 | .00577 | .01135 | .011323 | .01463 | .01499 | .01474 | .01417 | .01346 | .01271 | .01198 |
| | .99864 | .99514 | .99066 | .98623 | .98236 | .97918 | .97665 | .97464 | .97306 | .97160 |
| .06 | .00584 | .01080 | .01440 | .01661 | .01770 | .01799 | .01777 | .01725 | .01658 | .01585 |
| | .99886 | .99577 | .99153 | .98697 | .98265 | .97883 | .97560 | .97291 | .97070 | .96889 |
| .07 | .00588 | .01110 | .01521 | .01809 | .01986 | .02074 | .02098 | .02078 | .02031 | .01969 |
| | .99901 | .99627 | .99233 | .98784 | .98331 | .97907 | .97529 | .97202 | .96923 | .96686 |
| .08 | .00591 | .01129 | .01578 | .01920 | .02157 | .02303 | .02377 | .02397 | .02379 | .02336 |
| | .99913 | .99668 | .99304 | .98870 | .98413 | .97965 | .97550 | .97176 | .96845 | .96557 |
| .09 | .00593 | .01144 | .01620 | .02004 | .02292 | .02492 | .02615 | .02678 | .02695 | .02679 |
| | .99923 | .99701 | .99365 | .98952 | .98501 | .98044 | .97603 | .97194 | .96822 | .96489 |
| .10 | .00594 | .01154 | .01652 | .02069 | .02400 | .02647 | .02817 | .02924 | .02979 | .02994 |
| | .99930 | .99729 | .99417 | .99026 | .98587 | .98129 | .97676 | .97242 | .96837 | .96467 |

$U/K+IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 60

| | 1/B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|
| .01 | .00268 .99653 | .00214 .99452 | .00161 .99384 | .00126 .99355 | .00103 .99341 | .00087 .99334 | .00075 .99329 | .00066 .99326 | .00059 .99323 | .00053 .99322 | |
| .02 | .00428 .99726 | .00534 .99315 | .00495 .99052 | .00428 .98904 | .00369 .98819 | .00321 .98767 | .00283 .98734 | .00252 .98711 | .00227 .98695 | .00206 .98683 | |
| .03 | .00682 .99794 | .00741 .99368 | .00602 .98972 | .00771 .98585 | .00706 .98489 | .00642 .98356 | .00581 .98264 | .00520 .98199 | .00482 .98151 | .00442 .98115 | |
| .04 | .00504 .99639 | .00557 .99452 | .00426 .99013 | .01026 .98630 | .01071 .98329 | .01044 .98103 | .00983 .97935 | .00922 .97806 | .00856 .97712 | .00794 .97712 | |
| .05 | .00515 .99468 | .00923 .99527 | .01161 .99593 | .01306 .96663 | .01336 .98287 | .01316 .97978 | .01265 .97732 | .01202 .97537 | .01135 .97383 | .01069 .97261 | |
| .06 | .00521 .99689 | .00964 .99569 | .01285 .98177 | .01483 .98734 | .01579 .98314 | .01605 .97344 | .01586 .97369 | .01540 .97154 | .01480 .96978 | .01415 .96978 | |
| .07 | .00525 .99934 | .00990 .95638 | .01357 .99255 | .01615 .98819 | .01772 .98378 | .01851 .97967 | .01672 .97600 | .01655 .97262 | .01613 .97011 | .01757 .96781 | |
| .08 | .00527 .99916 | .01028 .99678 | .01409 .99324 | .01714 .98903 | .01925 .98459 | .02055 .98025 | .02121 .97621 | .02139 .97257 | .02123 .96936 | .02085 .96656 | |
| .09 | .00529 .99925 | .01021 .99710 | .01446 .99393 | .01789 .90982 | .02046 .98544 | .02224 .98100 | .02334 .97672 | .02390 .97274 | .02406 .96913 | .02391 .96589 | |
| .10 | .00530 .99932 | .01030 .99736 | .01474 .99434 | .01847 .99054 | .02142 .98628 | .02362 .98183 | .02515 .97743 | .02610 .97321 | .02659 .96928 | .02672 .96568 | |

$U/K + IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 65

| | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .01 | .00239 .99665 | .00191 .99465 | .00143 .99398 | .00112 .99370 | .00092 .99357 | .00077 .99349 | .00067 .99344 | .00059 .99341 | .00052 .99339 | .00047 .99338 |
| .02 | .00382 .99732 | .00478 .99331 | .00441 .99074 | .00382 .98329 | .00329 .98646 | .00267 .98796 | .00252 .98763 | .00225 .98741 | .00202 .98725 | .00184 .98713 |
| .05 | .00630 .99799 | .00662 .99362 | .00717 .98996 | .00688 .98715 | .00632 .98524 | .00573 .98394 | .00519 .98304 | .00471 .98240 | .00430 .98194 | .00394 .98159 |
| .04 | .00450 .99843 | .00765 .99465 | .00917 .99036 | .00356 .98661 | .00932 .98368 | .00882 .98147 | .00823 .97982 | .00764 .97859 | .00709 .97765 | .00658 .97693 |
| .05 | .00460 .99871 | .00824 .99538 | .01054 .95114 | .01165 .98694 | .01194 .98326 | .01174 .98025 | .01129 .97794 | .01073 .97594 | .01013 .97444 | .00954 .97324 |
| .06 | .00465 .99831 | .00860 .99598 | .01147 .95197 | .01323 .98764 | .01410 .96353 | .01433 .97391 | .01415 .97684 | .01375 .97430 | .01321 .97220 | .01263 .97048 |
| .07 | .00468 .99906 | .00884 .99646 | .01211 .99273 | .01441 .98846 | .01582 .98416 | .01652 .98014 | .01671 .97656 | .01656 .97345 | .01618 .97080 | .01568 .96855 |
| .08 | .00471 .99918 | .00900 .99685 | .01257 .99340 | .01529 .98926 | .01718 .98494 | .01634 .98070 | .01893 .9776 | .01909 .97320 | .01895 .97007 | .01861 .95733 |
| .09 | .00472 .99927 | .00911 .99716 | .01291 .99397 | .01597 .99006 | .01826 .98578 | .01985 .98144 | .02083 .97726 | .02134 .97338 | .02147 .96984 | .02134 .96669 |
| .10 | .00473 .99934 | .00919 .99743 | .01316 .99447 | .01618 .99076 | .01912 .98660 | .02108 .98225 | .02244 .97795 | .02329 .97383 | .02373 .97000 | .02355 .96648 |

$U/K + IV/K$
 -1
 $U+IV=SN$ (A+IB)

K=SIN 70

| 1/A | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .01 | .00212 .99672 | .00170 .99474 | .00127 .99409 | .00100 .99382 | .00062 .99368 | .00069 .99361 | .00059 .99356 | .00052 .99353 | .00047 .99351 | .00042 .99350 |
| .02 | .00340 .99377 | .00425 .99343 | .00392 .99090 | .00340 .98943 | .00293 .98867 | .00255 .96814 | .00224 .98785 | .00200 .98764 | .00180 .98748 | .00163 .98737 |
| .03 | .00382 .99603 | .00500 .99394 | .00637 .99015 | .00612 .98739 | .00562 .98551 | .00510 .98424 | .00461 .98335 | .00419 .98273 | .00382 .98227 | .00351 .98192 |
| .04 | .00400 .99645 | .00600 .99474 | .00816 .99054 | .00850 .98666 | .00629 .98396 | .00784 .98181 | .00731 .98019 | .00679 .97898 | .00630 .97805 | .00565 .97735 |
| .05 | .00409 .99674 | .00733 .99547 | .00937 .93130 | .01036 .98718 | .01062 .98357 | .01044 .98061 | .01004 .97825 | .00954 .97638 | .00901 .97490 | .00846 .97373 |
| .06 | .00413 .99893 | .00765 .99606 | .01020 .98211 | .01177 .9876 | .01253 .98384 | .01274 .98023 | .01258 .97727 | .01222 .97477 | .01175 .97271 | .01123 .97102 |
| .07 | .00416 .99903 | .00786 .99652 | .01077 .93206 | .01281 .98367 | .01406 .98445 | .01469 .96051 | .01486 .97699 | .01472 .97394 | .01439 .97133 | .01395 .96943 |
| .08 | .00418 .99919 | .00800 .99691 | .01118 .99352 | .01360 .98546 | .01528 .98522 | .01631 .98106 | .01663 .97718 | .01685 .97369 | .01685 .97369 | .01655 .97369 |
| .09 | .00420 .99928 | .00810 .99722 | .01147 .99498 | .01419 .99024 | .01623 .95604 | .01765 .98178 | .01852 .97768 | .01897 .97386 | .01898 .97386 | .01898 .96730 |
| .10 | .00421 .99935 | .00817 .99747 | .01170 .99457 | .01465 .99093 | .01700 .98684 | .01874 .98258 | .01995 .97836 | .02071 .97431 | .02110 .97055 | .02121 .96710 |

$U/K + IV/K^*$
 -1
 $U + IV = SN \quad (A + IB)$

K=SNH 75

| $1/A = .01$ | $1/A = .02$ | $1/A = .03$ | $1/A = .04$ | $1/A = .05$ | $1/A = .06$ | $1/A = .07$ | $1/A = .08$ | $1/A = .09$ | $1/A = .10$ |
|-----------------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| .01 .00187 .99676 | .03150 .99482 .99417 | .00112 .99390 .99347 | .00086 .99377 .99365 | .00072 .99370 .99362 | .00061 .99365 .99360 | .00052 .99365 .99359 | .00046 .99362 .99359 | .00041 .99360 .99359 | .00037 .99360 .99359 |
| .02 .00299 .99741 | .00374 .99352 .99103 | .00299 .98964 .98863 | .00258 .98834 .98834 | .00224 .98834 .98834 | .00196 .98834 .98834 | .00176 .98834 .98834 | .00156 .98834 .98834 | .00144 .98834 .98834 | .00144 .98834 .98834 |
| .03 .00337 .99806 .97412 | .00510 .99028 .98756 | .00501 .99028 .98571 | .00538 .98571 .98445 | .00495 .98445 .98445 | .00449 .98445 .98445 | .00406 .98445 .98445 | .00369 .98445 .98445 | .00336 .98445 .98445 | .00309 .98445 .98445 |
| .04 .00352 .95848 .99402 | .00598 .99087 .99087 | .00718 .98704 .98640 | .00748 .98640 .98640 | .00729 .98640 .98640 | .00690 .98640 .98640 | .00644 .98640 .98640 | .00593 .98640 .98640 | .00555 .98640 .98640 | .00515 .98640 .98640 |
| .05 .00360 .99875 .99553 | .00645 .99142 .98735 | .00825 .99142 .98380 | .00912 .99142 .98380 | .00935 .99142 .98380 | .00913 .99142 .98380 | .00884 .99142 .98380 | .00839 .99142 .98380 | .00793 .99142 .98380 | .00747 .99142 .98380 |
| .06 .00364 .99895 .99611 | .00673 .99222 .99222 | .00898 .99222 .98803 | .01036 .99222 .98803 | .01103 .99222 .98803 | .01121 .99222 .98803 | .01108 .99222 .98803 | .01076 .99222 .98803 | .01034 .99222 .98803 | .00968 .99222 .98803 |
| .07 .00367 .99909 .99656 | .00692 .99296 .99296 | .00946 .99296 .98883 | .01128 .99296 .98883 | .01248 .99296 .98883 | .01293 .99296 .98883 | .01306 .99296 .98883 | .01296 .99296 .98883 | .01267 .99296 .98883 | .01228 .99296 .98883 |
| .08 .00368 .99920 .99695 | .00704 .99361 .99361 | .00604 .99361 .98963 | .01197 .99361 .98963 | .01345 .99361 .98963 | .01436 .99361 .98963 | .01482 .99361 .98963 | .01494 .99361 .98963 | .01483 .99361 .98963 | .01457 .99361 .98963 |
| .09 .00369 .99929 .99726 | .00713 .99417 .99417 | .01010 .99417 .99037 | .01249 .99417 .986623 | .01129 .99417 .986623 | .01553 .99417 .986623 | .01620 .99417 .986623 | .01670 .99417 .986623 | .01681 .99417 .986623 | .01671 .99417 .986623 |
| .10 .00370 .99936 .99751 | .00719 .99465 .99105 | .01030 .99465 .98702 | .01290 .99465 .98702 | .01496 .99465 .98702 | .01650 .99465 .98702 | .01756 .99465 .98702 | .01823 .99465 .98702 | .01867 .99465 .98702 | .01867 .99465 .98702 |

$U/K+IV/K$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 60

| | $1/B$ | $1/A = .01$ | $1/A = .02$ | $1/A = .03$ | $1/A = .04$ | $1/A = .05$ | $1/A = .06$ | $1/A = .07$ | $1/A = .08$ | $1/A = .09$ | $1/A = .10$ |
|-----|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| .01 | .00161 | .00129 | .00097 | .00076 | .00062 | .00052 | .00045 | .00040 | .00035 | .00032 | |
| | .99679 | .99467 | .99423 | .99396 | .99363 | .99376 | .99371 | .99366 | .99365 | | |
| .02 | .00256 | .00322 | .00297 | .00258 | .00222 | .00193 | .00170 | .00151 | .00136 | .00124 | |
| | .99743 | .99356 | .99112 | .98974 | .98894 | .98845 | .98814 | .98793 | .98777 | .98766 | |
| .03 | .00290 | .00446 | .00483 | .00464 | .00426 | .00386 | .00350 | .00317 | .00290 | .00266 | |
| | .99606 | .99408 | .99038 | .98768 | .98585 | .98460 | .98374 | .98313 | .98268 | .98235 | |
| .04 | .00303 | .00515 | .00618 | .00644 | .00628 | .00594 | .00554 | .00515 | .00476 | .00444 | |
| | .99849 | .99487 | .99076 | .98717 | .98435 | .98223 | .98066 | .97947 | .97656 | .97768 | |
| .05 | .00310 | .00555 | .00710 | .00765 | .00805 | .00791 | .00761 | .00723 | .00683 | .00643 | |
| | .99677 | .99557 | .99151 | .98748 | .98396 | .98196 | .97876 | .97693 | .97549 | .97434 | |
| .06 | .00313 | .00580 | .00773 | .00892 | .00950 | .00965 | .00954 | .00926 | .00890 | .00851 | |
| | .99396 | .99615 | .99230 | .98615 | .98421 | .98074 | .97760 | .97536 | .97335 | .97170 | |
| .07 | .00316 | .00595 | .00816 | .00971 | .01066 | .01113 | .01126 | .01116 | .01091 | .01057 | |
| | .99910 | .99661 | .99303 | .98894 | .98481 | .98096 | .97753 | .97455 | .97201 | .96985 | |
| .08 | .00317 | .00606 | .00847 | .01031 | .01158 | .01236 | .01276 | .01287 | .01277 | .01254 | |
| | .99921 | .99698 | .99367 | .98973 | .98557 | .98150 | .97772 | .97431 | .97130 | .96868 | |
| .09 | .00318 | .00614 | .00870 | .01076 | .01230 | .01337 | .01404 | .01436 | .01447 | .01436 | |
| | .99930 | .99728 | .99422 | .99047 | .98636 | .98221 | .97820 | .97448 | .97109 | .96806 | |
| .10 | .00319 | .00619 | .00886 | .01111 | .01288 | .01421 | .01512 | .01570 | .01599 | .01607 | |
| | .99936 | .99753 | .99470 | .99114 | .98715 | .98299 | .97866 | .97492 | .97124 | .96787 | |

$U/K+IV/K'$
 $U+IV=SN^{-1}(A+IB)$

K=SIN 65

| 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|---------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .01 .99681 | .00131 .99490 | .00105 .99426 | .00079 .99400 | .00062 .99387 | .00050 .99379 | .00042 .99375 | .00037 .99372 | .00029 .99370 | .00026 .99369 |
| .02 .99745 | .00210 .99362 | .00262 .99117 | .00242 .98979 | .00210 .98900 | .00181 .98852 | .00157 .98821 | .00138 .98799 | .00123 .98784 | .00111 .98774 |
| .03 .99809 | .00236 .99411 | .00363 .99043 | .00393 .98775 | .00377 .98593 | .00347 .98469 | .00314 .98394 | .00264 .98323 | .00236 .98278 | .00216 .98245 |
| .04 .99850 | .00247 .99490 | .00419 .99081 | .00503 .98724 | .00524 .98444 | .00511 .98234 | .00483 .98077 | .00451 .97959 | .00389 .97870 | .00361 .97601 |
| .05 .99877 | .00252 .99560 | .00452 .99155 | .00578 .98755 | .00639 .98405 | .00655 .98117 | .00644 .97888 | .00619 .97706 | .00588 .97563 | .00555 .97449 |
| .06 .99897 | .00255 .99617 | .00472 .99234 | .00629 .98822 | .00725 .98430 | .00773 .98085 | .00785 .97793 | .00776 .97550 | .00754 .97350 | .00724 .97186 |
| .07 .99911 | .00257 .99663 | .00484 .99307 | .00664 .98900 | .00790 .98490 | .00867 .98107 | .00906 .97766 | .00916 .97470 | .00887 .97217 | .00860 .97002 |
| .08 .99921 | .00258 .99730 | .00493 .99370 | .00689 .98979 | .00838 .98565 | .00942 .98161 | .01006 .97785 | .01036 .97446 | .01039 .97147 | .01020 .96866 |
| .09 .99930 | .00259 .99730 | .00499 .99426 | .00707 .99052 | .00675 .98644 | .01001 .98231 | .01084 .97833 | .01142 .97463 | .01170 .97126 | .01177 .96625 |
| .10 .99937 | .00259 .99755 | .00504 .99473 | .00721 .99119 | .00904 .98722 | .01048 .98309 | .01156 .97699 | .01230 .97506 | .01277 .97140 | .01301 .96806 |

$$\frac{U/K + iV/K'}{U+iV=SN}^{-1}_{(A+iB)}$$

K=SIN 86

| | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .01 | .00124 .99681 | .00099 .99690 | .00074 .99426 | .00058 .94000 | .00048 .99387 | .00040 .99380 | .00035 .99375 | .00030 .99372 | .00027 .99370 | .00024 .99369 |
| .02 | .00198 .99745 | .00247 .99363 | .00228 .99117 | .00196 .99980 | .00171 .98901 | .00143 .98053 | .00131 .98822 | .00116 .98800 | .00105 .98785 | .00095 .98774 |
| .03 | .00223 .99809 | .00342 .99412 | .00371 .99044 | .00356 .98776 | .00327 .98594 | .00297 .98470 | .00269 .98385 | .00244 .98324 | .00222 .98279 | .00204 .98246 |
| .04 | .00233 .99850 | .00396 .99490 | .00475 .99082 | .00495 .98725 | .00442 .98445 | .00456 .98235 | .00426 .98078 | .00395 .97961 | .00367 .97871 | .00341 .97803 |
| .05 | .00238 .99877 | .00425 .99560 | .00546 .99156 | .00603 .98755 | .00510 .98406 | .00600 .98119 | .00584 .97889 | .00555 .97708 | .00524 .97565 | .00494 .97451 |
| .06 | .00241 .99897 | .00445 .99617 | .00594 .99235 | .00685 .98922 | .00730 .98432 | .00742 .98087 | .00733 .97794 | .00712 .97552 | .00684 .97352 | .00654 .97168 |
| .07 | .00242 .99911 | .00457 .99663 | .00627 .99307 | .00746 .98901 | .00819 .98491 | .00857 .98103 | .00865 .97767 | .00857 .97471 | .00838 .97219 | .00812 .97004 |
| .08 | .00244 .99922 | .00466 .99700 | .00651 .99371 | .00792 .98979 | .00819 .98566 | .00849 .98162 | .00980 .97746 | .00988 .97448 | .00981 .97149 | .00963 .95888 |
| .09 | .00244 .99930 | .00471 .99730 | .00668 .99426 | .00826 .99053 | .00945 .98645 | .01027 .98237 | .01078 .97874 | .01104 .97464 | .01112 .97128 | .01105 .96827 |
| .10 | .00245 .99937 | .00476 .99755 | .00681 .99473 | .00953 .99120 | .00990 .98723 | .01091 .98311 | .01162 .97900 | .01206 .97508 | .01228 .97142 | .01235 .96806 |

$U/K+IV/K^*$
 -1
 $U+IV=SH \quad (A+IB)$

K=STH 87

| | 1/B | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|
| .01 | .00115 .99681 | .00092 .99490 | .00069 .99427 | .00054 .99400 | .00044 .99387 | .00037 .99360 | .00032 .99373 | .00026 .99371 | .00025 .99369 | .00023 .99369 | |
| .02 | .00185 .99745 | .00231 .99363 | .00213 .99116 | .00185 .98981 | .00159 .98902 | .00138 .98853 | .00122 .98822 | .00109 .98801 | .00098 .98766 | .00089 .98775 | |
| .03 | .00206 .99809 | .00326 .99612 | .00346 .99044 | .00332 .98777 | .00305 .98595 | .00277 .98471 | .00251 .98386 | .00227 .98325 | .00208 .98280 | .00190 .98247 | |
| .04 | .00217 .99850 | .00359 .99490 | .00443 .99082 | .00461 .98726 | .00450 .98446 | .00426 .98230 | .00397 .98079 | .00369 .97962 | .00342 .97872 | .00318 .97804 | |
| .05 | .00222 .99877 | .00398 .99561 | .00509 .99156 | .00563 .98756 | .00577 .98407 | .00567 .98120 | .00545 .97890 | .00516 .97709 | .00489 .97566 | .00461 .97452 | |
| .06 | .00225 .99897 | .00415 .99618 | .00554 .99235 | .00633 .98823 | .00681 .98432 | .00692 .98086 | .00684 .97795 | .00664 .97553 | .00638 .97353 | .00610 .97169 | |
| .07 | .00226 .99911 | .00427 .99663 | .00585 .99308 | .00696 .98901 | .00764 .98492 | .00798 .98110 | .00807 .97768 | .00600 .97473 | .00758 .97220 | .0072 .97006 | |
| .08 | .00227 .99922 | .00434 .99700 | .00607 .99371 | .00739 .98980 | .00839 .98567 | .00886 .98163 | .00914 .97787 | .00922 .97449 | .00915 .97150 | .00899 .96890 | |
| .09 | .00228 .99930 | .00440 .99730 | .00623 .99426 | .00771 .99053 | .00882 .98646 | .00959 .96233 | .01006 .97836 | .01031 .97466 | .01037 .97129 | .01031 .96829 | |
| .10 | .00229 .99937 | .00444 .99755 | .00635 .99474 | .00796 .99120 | .00923 .98724 | .01018 .98311 | .01084 .97901 | .01125 .97509 | .01146 .97144 | .01152 .96809 | |

$U/K+IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 88

| $1/B$ | $1/A = .01$ | $1/A = .02$ | $1/A = .03$ | $1/A = .04$ | $1/A = .05$ | $1/A = .06$ | $1/A = .07$ | $1/A = .08$ | $1/A = .09$ | $1/A = .10$ |
|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .01 | .00105 .99682 | .00064 .99491 | .00063 .99427 | .00050 .99401 | .00041 .99386 | .00054 .99360 | .00030 .99376 | .00026 .99373 | .00023 .99371 | .00021 .99370 |
| .02 | .00169 .99745 | .00211 .99363 | .00195 .99116 | .00169 .98981 | .00145 .98902 | .00127 .98854 | .00111 .98823 | .00099 .98801 | .00089 .98786 | .00081 .98775 |
| .03 | .00190 .99809 | .00292 .99412 | .00316 .99045 | .00304 .98777 | .00279 .98595 | .00253 .98472 | .00229 .98386 | .00208 .98325 | .00190 .98281 | .00174 .98248 |
| .04 | .00199 .99850 | .00338 .99490 | .00405 .99083 | .00422 .98726 | .00411 .98447 | .00369 .98236 | .00363 .98080 | .00337 .97962 | .00313 .97673 | .00291 .97605 |
| .05 | .00203 .99376 | .00364 .99561 | .00465 .99157 | .00514 .98757 | .00527 .98407 | .00518 .98120 | .00498 .97891 | .00474 .97710 | .00447 .97567 | .00421 .97453 |
| .06 | .00205 .99697 | .00380 .99618 | .00506 .99235 | .00584 .98824 | .00622 .98433 | .00633 .98088 | .00625 .97796 | .00607 .97554 | .00583 .97354 | .00558 .97190 |
| .07 | .00207 .99911 | .00390 .99663 | .00535 .99308 | .00636 .98902 | .00696 .98493 | .00729 .98110 | .00738 .97769 | .00731 .97474 | .00715 .97221 | .00707 .97007 |
| .08 | .00208 .99922 | .00397 .99700 | .00555 .99371 | .00675 .98980 | .00759 .98567 | .00910 .98164 | .00836 .97708 | .00843 .97450 | .00837 .97152 | .00822 .96891 |
| .09 | .00208 .99930 | .00402 .99730 | .00570 .99426 | .00705 .99054 | .00806 .98647 | .00876 .98234 | .00920 .97836 | .00942 .97467 | .00946 .97130 | .00942 .96830 |
| .10 | .00209 .99937 | .00406 .99755 | .00581 .99474 | .00728 .99121 | .00844 .98725 | .00931 .98311 | .00991 .97902 | .01028 .97510 | .01048 .97145 | .01053 .96811 |

$U/K \approx IV/K \approx$
 -1
 $U+IV=SN^{-1}(A+IB)$

K=SIN 89

| | 1/A = .01 | 1/A = .02 | 1/A = .03 | 1/A = .04 | 1/A = .05 | 1/A = .06 | 1/A = .07 | 1/A = .08 | 1/A = .09 | 1/A = .10 |
|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| .01 | .00092 | .00074 | .00055 | .00043 | .00035 | .00030 | .00026 | .00023 | .00020 | .00018 |
| | .99682 | .99491 | .99427 | .99401 | .99388 | .99361 | .99376 | .99373 | .99371 | .99370 |
| .02 | .00147 | .00184 | .00170 | .00147 | .00127 | .00110 | .00097 | .00087 | .00078 | .00071 |
| | .99745 | .99363 | .99118 | .98981 | .98902 | .98854 | .98823 | .98802 | .98787 | .98776 |
| .03 | .00166 | .00255 | .00276 | .00265 | .00243 | .00221 | .00200 | .00181 | .00166 | .00152 |
| | .99809 | .99412 | .99045 | .98777 | .98596 | .98472 | .98387 | .98326 | .98261 | .98248 |
| .04 | .00173 | .00294 | .00353 | .00368 | .00359 | .00340 | .00317 | .00294 | .00273 | .00254 |
| | .99850 | .99491 | .99083 | .98726 | .98447 | .98237 | .98060 | .97963 | .97874 | .97805 |
| .05 | .00177 | .00317 | .00406 | .00449 | .00460 | .00460 | .00435 | .00413 | .00390 | .00368 |
| | .99878 | .99561 | .99157 | .98757 | .98408 | .98408 | .97892 | .97711 | .97568 | .97454 |
| .06 | .00179 | .00331 | .00442 | .00510 | .00543 | .00552 | .00545 | .00529 | .00509 | .00486 |
| | .99897 | .99618 | .99236 | .98924 | .98433 | .98089 | .97797 | .97554 | .97355 | .97191 |
| .07 | .00180 | .00340 | .00466 | .00555 | .00609 | .00636 | .00644 | .00638 | .00623 | .00604 |
| | .99911 | .99664 | .99308 | .98902 | .98493 | .98111 | .9770 | .97474 | .97222 | .97008 |
| .08 | .00181 | .00346 | .00484 | .00589 | .00662 | .00706 | .00729 | .00735 | .00730 | .00717 |
| | .99922 | .99700 | .99372 | .98986 | .98568 | .98164 | .97739 | .97451 | .97152 | . |
| .09 | .00182 | .00351 | .00497 | .00615 | .00703 | .00764 | .00802 | .00822 | .00827 | .00827 |
| | .99930 | .99730 | .99427 | .99054 | .98647 | .98234 | .97837 | .97467 | .97131 | .96831 |
| .10 | .00182 | .00354 | .00507 | .00635 | .00736 | .00812 | .00864 | .00897 | .00914 | .00919 |
| | .99937 | .99755 | .99474 | .99121 | .98725 | .98312 | .97902 | .97511 | .97145 | .96831 |

U/K+IV/K'
-1
J+IV=SM (A+18)

K=SIN 5

| 1/8 | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 | | | |
|------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|-------------------|--|--|--|
| .10 | .31707 .83951 | .21240 .77528 | .15071 .75863 | .11563 .75259 | .09350 .74960 | .07833 .74795 | .06742 .74695 | .05913 .74630 | .05264 .74585 | .04743 .74552 | | | |
| .20 | .54151 .82986 | .43801 .68908 | .33330 .64266 | .26394 .62270 | .21695 .61255 | .18353 .60676 | .15885 .60317 | .12986 .60079 | .12485 .59914 | .11272 .593795 | | | |
| .30 | .65546 .83564 | .57842 .65456 | .46610 .58574 | .38140 .55252 | .31948 .53440 | .27346 .52361 | .23838 .51677 | .21093 .51216 | .16897 .50892 | .17104 .50657 | | | |
| .40 | .72377 .84125 | .66710 .63848 | .56075 .55520 | .47217 .51114 | .40272 .48561 | .34870 .46983 | .30626 .45954 | .27240 .45251 | .24493 .44753 | .22228 .44387 | | | |
| .50 | .76954 .84544 | .72654 .62997 | .62966 .53736 | .54282 .48505 | .47048 .46314 | .41170 .43273 | .36415 .41911 | .32545 .40968 | .29361 .40292 | .26711 .39794 | | | |
| .60 | .80246 .84847 | .76861 .62499 | .68126 .52624 | .59860 .46774 | .52441 .43340 | .46480 .40592 | .41373 .38920 | .37134 .37747 | .33599 .36901 | .30630 .36274 | | | |
| .70 | .82729 .85068 | .79977 .62186 | .72097 .51891 | .64334 .45575 | .57225 .41413 | .50992 .38589 | .45651 .36629 | .41128 .35241 | .37306 .34233 | .34065 .33484 | | | |
| .80 | .84669 .85233 | .82369 .61976 | .75229 .51387 | .67979 .44717 | .61105 .40194 | .54864 .37048 | .49371 .354828 | .44628 .33237 | .40566 .32077 | .37092 .31213 | | | |
| .90 | .86226 .85356 | .84799 .62830 | .77754 .51026 | .70993 .44085 | .64397 .39265 | .58214 .35838 | .52634 .33379 | .47720 .31600 | .43454 .30296 | .39774 .293324 | | | |
| 1.00 | .87501 .85452 | .85788 .61724 | .79826 .50760 | .73517 .43606 | .67206 .38542 | .61137 .34870 | .55518 .32134 | .50471 .30238 | .46030 .28799 | .42165 .27725 | | | |

$U/K+IV/K'$
 -1
 $U+IV=SH \quad (A+IB)$

K=SIN 10

| 1/B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| .10 | .17639 | .13223 | .07499 | .06096 | .05124 | .04416 | .03677 | .03455 | .03114 | |
| | .90630 | .85571 | .83470 | .83162 | .83022 | .82925 | .82861 | .82816 | .82785 | |
| .20 | .29222 | .31588 | .20960 | .17423 | .14832 | .12880 | .11367 | .10164 | .09186 | |
| | .91903 | .80306 | .75453 | .72641 | .71399 | .70686 | .70242 | .69948 | .69744 | .69596 |
| .30 | .33706 | .44798 | .39411 | .33124 | .28072 | .24177 | .21152 | .18760 | .16334 | .1554 |
| | .93657 | .79134 | .70409 | .66087 | .63737 | .62342 | .61456 | .60861 | .60144 | .60140 |
| .40 | .35719 | .53920 | .49657 | .42869 | .36950 | .32161 | .28345 | .25263 | .22747 | .20664 |
| | .94913 | .79074 | .67672 | .61995 | .58639 | .56582 | .55247 | .54337 | .53693 | .53222 |
| .50 | .36762 | .60470 | .57320 | .50529 | .44201 | .38063 | .34470 | .30861 | .27874 | .25379 |
| | .95792 | .79353 | .66363 | .59329 | .55127 | .52470 | .50709 | .49494 | .46627 | .47988 |
| .60 | .37364 | .65383 | .63143 | .56590 | .50142 | .44483 | .39691 | .35678 | .32314 | .29479 |
| | .96426 | .79705 | .65451 | .57522 | .52626 | .49439 | .47286 | .45703 | .44702 | .43903 |
| .70 | .37740 | .69208 | .67665 | .61452 | .55059 | .49233 | .44173 | .39848 | .36177 | .33054 |
| | .96900 | .80445 | .54637 | .56255 | .50791 | .47142 | .44632 | .42860 | .41578 | .40628 |
| .80 | .37990 | .72273 | .71252 | .65410 | .59174 | .53304 | .48057 | .43489 | .39560 | .36190 |
| | .97266 | .80347 | .64413 | .55338 | .49413 | .45361 | .42525 | .40504 | .39033 | .37941 |
| .90 | .38164 | .74887 | .74155 | .68679 | .62654 | .56811 | .51451 | .46694 | .42547 | .38960 |
| | .97557 | .80609 | .64105 | .54658 | .48355 | .43952 | .40821 | .38567 | .36919 | .35694 |
| 1.00 | .38290 | .76889 | .76544 | .71415 | .65629 | .59863 | .54443 | .49538 | .45204 | .41423 |
| | .97793 | .80832 | .63886 | .54141 | .47528 | .42820 | .39421 | .36949 | .35134 | .33764 |

$$U/K+IV/K = -1$$

K = SIN 15

| $1/B$ | $1/A = .10$ | $1/A = .20$ | $1/A = .30$ | $1/A = .40$ | $1/A = .50$ | $1/A = .60$ | $1/A = .70$ | $1/A = .80$ | $1/A = .90$ | $1/A = 1.00$ |
|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .10 | .11923 .92931 | .09237 .38869 | .06833 .87618 | .05327 .87107 | .04341 .86857 | .03654 .86717 | .03151 .86632 | .02768 .86576 | .02467 .86537 | .02225 .86509 |
| .20 | .19405 .94146 | .22758 .85412 | .19601 .80602 | .16277 .78248 | .13684 .76996 | .11723 .76266 | .10219 .75608 | .09041 .75503 | .08096 .75291 | .07328 .75137 |
| .30 | .22067 .95532 | .32333 .85455 | .31253 .77440 | .27317 .72884 | .23575 .70297 | .20502 .68737 | .18042 .67737 | .16062 .67063 | .14449 .66589 | .13116 .66243 |
| .40 | .23201 .96467 | .38577 .86479 | .40531 .76150 | .36783 .69614 | .32398 .65728 | .28507 .63318 | .25277 .61747 | .22619 .60675 | .20421 .59915 | .18586 .59358 |
| .50 | .23770 .97100 | .42733 .87674 | .47762 .75718 | .44562 .67542 | .39854 .62520 | .35423 .59332 | .31612 .57219 | .28409 .55763 | .25725 .54724 | .23464 .53960 |
| .60 | .24093 .97549 | .45599 .88804 | .53516 .75677 | .50913 .66173 | .46100 .60199 | .41318 .56326 | .37077 .53721 | .33443 .51908 | .30359 .50606 | .27739 .49645 |
| .70 | .24292 .97860 | .47643 .89819 | .58133 .75812 | .56116 .65232 | .51332 .58475 | .46344 .54009 | .41792 .50359 | .37617 .48818 | .34402 .47272 | .31475 .46128 |
| .80 | .24424 .98135 | .49144 .90687 | .61924 .76019 | .60424 .64964 | .55742 .57165 | .50655 .52187 | .45883 .48739 | .41638 .46294 | .37943 .44522 | .34752 .43209 |
| .90 | .24515 .98335 | .50275 .91448 | .65088 .76250 | .64027 .64075 | .59490 .56152 | .54380 .50732 | .49459 .46924 | .44998 .44200 | .41065 .42217 | .37642 .40746 |
| 1.00 | .24580 .90493 | .51144 .92109 | .67771 .76481 | .67072 .63708 | .62702 .55353 | .57622 .49552 | .52608 .45419 | .47976 .42437 | .40207 .40256 | .38638 .38638 |

$U/K + IV/K'$
 -1
 $U + IV = SN \quad (A + IB)$

K=SIN 20

| $1/A$ | $1/A = .10$ | $1/A = .20$ | $1/A = .30$ | $1/A = .40$ | $1/A = .50$ | $1/A = .60$ | $1/A = .70$ | $1/A = .80$ | $1/A = .90$ | $1/A = 1.00$ |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| .10 | .08951 | .07022 | .05221 | .04079 | .03327 | .02803 | .02418 | .02125 | .01894 | .01706 |
| | .94117 | .90667 | .89584 | .89137 | .88917 | .88794 | .88719 | .88669 | .88635 | .88611 |
| .20 | .14471 | .17435 | .15402 | .12965 | .10980 | .09447 | .08257 | .07319 | .06563 | .05945 |
| | .95197 | .87985 | .83751 | .81580 | .80399 | .79701 | .79260 | .78965 | .78759 | .78609 |
| .30 | .16382 | .24592 | .24892 | .22400 | .19641 | .17238 | .15254 | .13631 | .12293 | .114180 |
| | .96362 | .88378 | .81480 | .77171 | .74602 | .73015 | .71985 | .71204 | .70789 | .70427 |
| .40 | .17184 | .29002 | .32430 | .30779 | .27749 | .24747 | .22111 | .19884 | .18012 | .16433 |
| | .97133 | .89527 | .83992 | .74736 | .70731 | .68169 | .66472 | .65305 | .64473 | .63862 |
| .50 | .17584 | .31759 | .38235 | .37852 | .34876 | .31483 | .28347 | .25617 | .23283 | .21291 |
| | .97652 | .90712 | .81306 | .73428 | .68036 | .64593 | .62239 | .60606 | .59435 | .58572 |
| .60 | .17810 | .33550 | .42725 | .43762 | .41017 | .37385 | .33865 | .30720 | .27990 | .25638 |
| | .98017 | .91756 | .81961 | .72759 | .66251 | .61883 | .58922 | .56048 | .55356 | .54253 |
| .70 | .17949 | .34761 | .46252 | .48717 | .46284 | .42525 | .38706 | .35218 | .32149 | .29484 |
| | .96287 | .92637 | .82744 | .72453 | .64922 | .59791 | .56269 | .53788 | .51998 | .50674 |
| .80 | .18076 | .35611 | .49068 | .52907 | .50812 | .46993 | .42952 | .39182 | .35821 | .32880 |
| | .98493 | .93133 | .83555 | .72356 | .63940 | .58138 | .54110 | .51257 | .49192 | .47663 |
| .90 | .18104 | .36226 | .51353 | .56486 | .54722 | .50891 | .46691 | .42687 | .39074 | .35886 |
| | .98655 | .93989 | .84340 | .72380 | .63198 | .56803 | .52325 | .49131 | .46612 | .45024 |
| 1.00 | .18149 | .36684 | .53234 | .59573 | .58118 | .54317 | .50000 | .45804 | .41969 | .38550 |
| | .98787 | .94510 | .85103 | .72471 | .62625 | .55722 | .50834 | .47324 | .44768 | .42876 |

$U/K + \frac{IV}{I} V/K$
 -1
 $U+IV=SN$ (A+B)

K=SIN 25

| | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| .10 | *.07135 | *.05630 | *.04197 | *.03263 | *.02679 | *.02257 | *.01948 | *.01712 | *.01526 | *.01377 |
| | *.94848 | *.92817 | *.90831 | *.89430 | *.89032 | *.89122 | *.89054 | *.89009 | *.89979 | *.89957 |
| .20 | *.11498 | *.14019 | *.12545 | *.10643 | *.09054 | *.07810 | *.06839 | *.06068 | *.05447 | *.04936 |
| | *.95820 | *.69538 | *.85743 | *.83747 | *.82645 | *.81989 | *.81572 | *.81293 | *.81097 | *.80954 |
| .30 | *.12991 | *.19678 | *.20351 | *.18647 | *.16531 | *.14607 | *.12904 | *.11636 | *.10516 | *.09578 |
| | *.96844 | *.90026 | *.33960 | *.79979 | *.77525 | *.75978 | *.74962 | *.74266 | *.73771 | *.73406 |
| .40 | *.13613 | *.23064 | *.26475 | *.25831 | *.23718 | *.21380 | *.19250 | *.17393 | *.15808 | *.14456 |
| | *.97517 | *.91130 | *.87913 | *.78114 | *.74232 | *.71667 | *.69936 | *.68733 | *.67869 | *.67232 |
| .50 | *.13923 | *.25123 | *.31056 | *.31906 | *.30152 | *.27652 | *.25132 | *.22850 | *.20253 | *.19125 |
| | *.97953 | *.92215 | *.84444 | *.77350 | *.72355 | *.68550 | *.66084 | *.64351 | *.63100 | *.62173 |
| .60 | *.14097 | *.26430 | *.34480 | *.36965 | *.35804 | *.33261 | *.30467 | *.27831 | *.25475 | *.23410 |
| | *.96285 | *.93163 | *.85313 | *.77206 | *.70798 | *.66250 | *.63074 | *.60824 | *.59194 | *.57984 |
| .70 | *.14205 | *.27298 | *.37065 | *.41183 | *.40717 | *.38243 | *.35243 | *.32308 | *.29635 | *.27268 |
| | *.96518 | *.93911 | *.86250 | *.77409 | *.69953 | *.64514 | *.60670 | *.57932 | *.55944 | *.54469 |
| .80 | *.14275 | *.27899 | *.39047 | *.44723 | *.44999 | *.42651 | *.39501 | *.35311 | *.33358 | *.30717 |
| | *.98697 | *.94543 | *.87163 | *.77804 | *.69425 | *.63171 | *.58713 | *.55521 | *.53200 | *.51477 |
| .90 | *.14324 | *.28329 | *.40588 | *.47722 | *.48749 | *.46553 | *.43300 | *.39892 | *.36687 | *.33798 |
| | *.98838 | *.95067 | *.88017 | *.78506 | *.69198 | *.62127 | *.57094 | *.53460 | *.50849 | *.48699 |
| 1.00 | *.14359 | *.28647 | *.41805 | *.50287 | *.52050 | *.50032 | *.46697 | *.43103 | *.39673 | *.36555 |
| | *.98951 | *.95505 | *.88800 | *.78944 | *.58930 | *.61279 | *.55734 | *.51731 | *.48813 | *.46652 |

$U/K+IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 30

| | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| .10 | .05907 .95344 | .04677 .92591 | .03491 .91691 | .02732 .91323 | .02231 .91142 | .01680 .91041 | .01622 .90979 | .01426 .90938 | .01271 .90910 | .01147 .90889 |
| .20 | .09503 .96235 | .01669 .90577 | .010510 .87107 | .008956 .85256 | .007642 .84224 | .006604 .83607 | .005789 .83213 | .005140 .82948 | .004616 .82763 | .004185 .82628 |
| .30 | .10726 .97162 | .016317 .91087 | .017082 .85612 | .015011 .81921 | .014119 .79596 | .012535 .78110 | .011177 .77125 | .010036 .75446 | .009086 .75961 | .008285 .75605 |
| .40 | .11234 .97769 | .019060 .92127 | .022153 .85666 | .021971 .80415 | .020427 .76725 | .018577 .74225 | .016825 .72512 | .015252 .71308 | .013900 .70432 | .012737 .69794 |
| .50 | .11486 .98175 | .020703 .93124 | .025885 .86364 | .027114 .79971 | .026124 .75927 | .024247 .71499 | .022221 .69016 | .020316 .67246 | .018613 .65957 | .017116 .64996 |
| .60 | .11628 .98450 | .021736 .93966 | .028607 .87272 | .031398 .80116 | .031129 .74082 | .029397 .69572 | .027214 .66327 | .025023 .63968 | .023023 .62276 | .021223 .60996 |
| .70 | .11716 .98670 | .022416 .94655 | .030614 .88206 | .034884 .80563 | .035491 .73622 | .034018 .68196 | .031754 .64217 | .029748 .61326 | .027366 .59203 | .024392 .57617 |
| .80 | .11773 .98830 | .022684 .95218 | .032117 .89089 | .037753 .81211 | .039292 .73474 | .035860 .67204 | .03265 .62528 | .03265 .59110 | .030748 .56597 | .028446 .54721 |
| .90 | .11813 .98957 | .023219 .95663 | .033263 .89895 | .040129 .81917 | .042619 .73529 | .041654 .66483 | .039569 .61152 | .036815 .57236 | .034063 .51354 | .031506 .52207 |
| 1.00 | .11841 .99059 | .023463 .96071 | .034150 .90619 | .042113 .82644 | .045544 .73716 | .045178 .65957 | .042927 .60014 | .040331 .55628 | .037074 .52400 | .034297 .50000 |

$U/K+IV/K^*$

$U+V=SN^{-1} (A+IB)$

$K=\sin 35$

| $1/A = .10$ | $1/A = .20$ | $1/A = .30$ | $1/A = .40$ | $1/A = .50$ | $1/A = .60$ | $1/A = .70$ | $1/A = .80$ | $1/A = .90$ | $1/A = 1.00$ |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| .10 | .05018 | .03981 | .02974 | .02329 | .01902 | .01603 | .01303 | .01216 | .01064 |
| | .95701 | .93153 | .92316 | .91974 | .91806 | .91711 | .91653 | .91615 | .91589 |
| .20 | .06165 | .09931 | .08992 | .07687 | .06569 | .05683 | .04985 | .04429 | .03979 |
| | .96532 | .91319 | .88094 | .86356 | .85385 | .84801 | .84428 | .84176 | .83999 |
| .30 | .09096 | .13872 | .14522 | .13625 | .12226 | .10890 | .09732 | .08754 | .07933 |
| | .97388 | .91628 | .86784 | .83326 | .81121 | .79697 | .78746 | .78088 | .77617 |
| .40 | .09524 | .16170 | .16931 | .18957 | .17773 | .16262 | .14782 | .13449 | .12283 |
| | .97948 | .92810 | .86926 | .82052 | .78553 | .76139 | .74465 | .73279 | .72417 |
| .50 | .09737 | .17536 | .22052 | .23399 | .22789 | .21347 | .19690 | .18085 | .16623 |
| | .98321 | .93738 | .8764 | .81795 | .77132 | .73715 | .71265 | .69497 | .66197 |
| .60 | .09856 | .18389 | .24291 | .27008 | .27185 | .25991 | .24274 | .22467 | .20753 |
| | .98594 | .94515 | .88541 | .82092 | .76452 | .72083 | .68856 | .66491 | .64740 |
| .70 | .09930 | .18948 | .25933 | .29922 | .30995 | .30175 | .28483 | .25510 | .24593 |
| | .98777 | .95147 | .89443 | .82676 | .76247 | .70998 | .67016 | .64061 | .61862 |
| .80 | .09978 | .19332 | .27442 | .32280 | .34291 | .33924 | .32322 | .30254 | .28125 |
| | .98924 | .9563 | .90276 | .83394 | .76345 | .70296 | .65590 | .62061 | .59426 |
| .90 | .10011 | .19605 | .28053 | .34198 | .37148 | .37298 | .35621 | .33668 | .31362 |
| | .99041 | .96083 | .91031 | .84161 | .75636 | .69664 | .64470 | .60388 | .57336 |
| 1.00 | .10035 | .19806 | .26753 | .35759 | .39633 | .40329 | .39013 | .36796 | .34324 |
| | .99135 | .96441 | .91700 | .84930 | .77048 | .69624 | .63578 | .58965 | .55513 |

$U/K + IV/K'$
 $U+IV=SN$ $(A+18)$
 -1

K=SIN 40

| | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .10 | .04341 .95970 | .03444 .93576 | .02576 .92789 | .02019 .92466 | .01649 .92307 | .01390 .92218 | .01199 .92163 | .01054 .92127 | .00940 .92103 | .00848 .92085 |
| .20 | .06972 .96753 | .08605 .91873 | .07814 .86637 | .06693 .87193 | .05727 .06268 | .04958 .05711 | .04352 .05354 | .03868 .05114 | .03475 .04945 | .03152 .04822 |
| .30 | .07860 .97556 | .12005 .92372 | .12710 .87651 | .11896 .84385 | .10709 .82279 | .09561 .08910 | .08550 .09992 | .07707 .07935 | .06990 .07656 | .06362 .07656 |
| .40 | .08229 .98080 | .13375 .93305 | .16431 .87840 | .16558 .83264 | .15613 .79930 | .14348 .77602 | .13083 .75973 | .11931 .74811 | .10915 .73963 | .10030 .73329 |
| .50 | .08411 .98330 | .15140 .94179 | .19193 .88562 | .20418 .83118 | .20044 .78701 | .18891 .75405 | .17519 .73009 | .16149 .71261 | .14883 .69968 | .13746 .68993 |
| .60 | .08514 .98675 | .15864 .94967 | .21008 .89434 | .23524 .83494 | .23911 .78196 | .23065 .73992 | .21689 .70826 | .20175 .68471 | .18704 .66711 | .17347 .65377 |
| .70 | .08577 .98856 | .16339 .95496 | .22382 .90294 | .26003 .84128 | .27240 .78151 | .26815 .73124 | .25536 .69209 | .23936 .66248 | .22295 .64018 | .20738 .62322 |
| .80 | .08619 .98994 | .16663 .95979 | .23391 .91085 | .27985 .84374 | .30094 .78395 | .30176 .72635 | .29061 .69005 | .27417 .64450 | .25632 .61755 | .23891 .59704 |
| .90 | .08647 .99103 | .16894 .96374 | .24147 .91794 | .29579 .85650 | .32544 .78816 | .33184 .72416 | .32284 .67106 | .30629 .62972 | .28716 .59824 | .26801 .57428 |
| 1.00 | .08668 .99191 | .17064 .96703 | .2724 .92419 | .30869 .86415 | .34650 .79347 | .35880 .72386 | .35235 .66436 | .33590 .61739 | .31563 .58150 | .29482 .55423 |

$U/K+IV/K^*$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 45

| 1/A | 1/k = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| .10 | .03804 | .03024 | .02262 | .01772 | .01444 | .01220 | .01053 | .00925 | .00621 | .00744 |
| | .96177 | .93903 | .93154 | .92847 | .92055 | .92645 | .92558 | .92524 | .92501 | .92484 |
| .20 | .06107 | .07550 | .06869 | .05992 | .05046 | .04371 | .03838 | .03412 | .03066 | .02781 |
| | .96922 | .92298 | .89409 | .87839 | .86953 | .85419 | .86076 | .85845 | .85683 | .85565 |
| .30 | .06063 | .10523 | .11174 | .10490 | .09466 | .08465 | .07586 | .06837 | .06205 | .05669 |
| | .97685 | .92786 | .80315 | .85198 | .83176 | .81856 | .80968 | .80349 | .79905 | .79576 |
| .40 | .07205 | .12238 | .14430 | .14603 | .13826 | .12745 | .11649 | .10641 | .09748 | .08956 |
| | .98182 | .93678 | .88527 | .84165 | .80931 | .78740 | .77155 | .76020 | .75187 | .74564 |
| .50 | .07364 | .13250 | .16753 | .17992 | .17759 | .16825 | .15654 | .14471 | .13364 | .12365 |
| | .98513 | .94510 | .89241 | .84109 | .79898 | .76715 | .74377 | .72658 | .71379 | .70411 |
| .60 | .07454 | .13677 | .16399 | .20699 | .21178 | .20559 | .19433 | .18149 | .16876 | .15687 |
| | .98745 | .95200 | .90086 | .84527 | .79510 | .75464 | .72371 | .70045 | .68292 | .65955 |
| .70 | .07509 | .14287 | .19580 | .22843 | .24103 | .23915 | .22926 | .21603 | .20201 | .18845 |
| | .98917 | .95760 | .90912 | .85181 | .79566 | .74751 | .70929 | .67995 | .65760 | .64048 |
| .80 | .07545 | .14568 | .20443 | .24542 | .26593 | .26912 | .26133 | .24015 | .23311 | .21805 |
| | .99047 | .96214 | .91668 | .85931 | .79695 | .74413 | .69900 | .66367 | .63652 | .61566 |
| .90 | .07550 | .14767 | .21088 | .25897 | .28710 | .29582 | .29365 | .27790 | .26204 | .24559 |
| | .99150 | .96587 | .92340 | .86699 | .80389 | .74339 | .69176 | .65059 | .61671 | .59418 |
| 1.00 | .07588 | .14913 | .21578 | .26987 | .30515 | .31963 | .31749 | .30544 | .28691 | .27115 |
| | .99234 | .96896 | .92931 | .87445 | .80975 | .74450 | .68601 | .63996 | .60343 | .57532 |

$U/K + IV/K$

-1

$U + IV = SN^{-1}(A + IB)$

K=SIN 50

| $1/A = .10$ | $1/A = .20$ | $1/A = .30$ | $1/A = .40$ | $1/A = .50$ | $1/A = .60$ | $1/A = .70$ | $1/A = .80$ | $1/A = .90$ | $1/A = 1.00$ |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| .10 | .03365 | .02676 | .02002 | .01568 | .01281 | .01080 | .00932 | .00819 | .00731 |
| | .96339 | .94160 | .93441 | .93146 | .93001 | .92919 | .92068 | .92836 | .92813 |
| .20 | .05399 | .06682 | .06089 | .05228 | .04479 | .03882 | .03409 | .03031 | .02725 |
| | .97054 | .92629 | .89858 | .88347 | .87493 | .86977 | .86647 | .86423 | .86152 |
| .30 | .06065 | .09308 | .09904 | .09318 | .08423 | .07541 | .06764 | .06100 | .05538 |
| | .97785 | .93107 | .888828 | .85834 | .83882 | .82603 | .81746 | .81138 | .80705 |
| .40 | .06368 | .10819 | .12781 | .12372 | .12317 | .11381 | .10420 | .09531 | .08739 |
| | .98261 | .93966 | .89056 | .84899 | .81820 | .79638 | .76092 | .76981 | .76165 |
| .50 | .06509 | .11707 | .16823 | .15971 | .15826 | .15045 | .14038 | .13004 | .12030 |
| | .98577 | .94764 | .85759 | .84870 | .80826 | .77743 | .75460 | .73772 | .72510 |
| .60 | .06588 | .12257 | .15264 | .18354 | .16654 | .14397 | .17457 | .16354 | .15243 |
| | .98880 | .95425 | .90579 | .85310 | .80516 | .76610 | .73591 | .71301 | .69563 |
| .70 | .06636 | .12617 | .17294 | .20230 | .21451 | .21403 | .20622 | .19510 | .18302 |
| | .98964 | .95959 | .91377 | .85970 | .80639 | .76019 | .72263 | .69390 | .67166 |
| .80 | .06668 | .12862 | .18045 | .21708 | .23639 | .24077 | .23524 | .22453 | .21176 |
| | .99089 | .96393 | .92102 | .86714 | .81019 | .75776 | .71387 | .67901 | .65191 |
| .90 | .06690 | .13036 | .18604 | .22081 | .25488 | .26449 | .26177 | .25183 | .23861 |
| | .99187 | .96749 | .92746 | .87457 | .81551 | .75800 | .70796 | .66732 | .63540 |
| 1.00 | .06706 | .13164 | .19026 | .23819 | .27053 | .28552 | .28600 | .27716 | .26364 |
| | .99267 | .97044 | .93310 | .88194 | .82164 | .76002 | .70433 | .65809 | .62142 |

$U/K+IV/K'$
 -1
 $U \rightarrow IV = SN \quad (A + IB)$

K=SIN 55

| $1/A = .10$ | $1/A = .20$ | $1/A = .30$ | $1/A = .40$ | $1/A = .50$ | $1/A = .60$ | $1/A = .70$ | $1/A = .80$ | $1/A = .90$ | $1/A = 1.00$ |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| .02994 | .02362 | .01763 | .01397 | .01141 | .00962 | .00830 | .00730 | .00651 | .00587 |
| .96467 | .94363 | .93668 | .93363 | .93243 | .93164 | .93115 | .93084 | .93062 | .93046 |
| .20 | .04803 | .05949 | .05426 | .04662 | .03997 | .03465 | .03043 | .02706 | .02207 |
| .97159 | .92391 | .90213 | .88750 | .87922 | .87421 | .87160 | .86863 | .86731 | .86619 |
| .30 | .05412 | .06283 | .06626 | .06317 | .07527 | .06746 | .06054 | .05463 | .04961 |
| .97064 | .93356 | .89232 | .86336 | .84442 | .83197 | .82356 | .81768 | .81345 | .81032 |
| .40 | .05664 | .06623 | .11303 | .11579 | .11017 | .10197 | .09349 | .08559 | .07854 |
| .98323 | .94191 | .89470 | .85469 | .82475 | .80349 | .78039 | .77750 | .76948 | .76345 |
| .50 | .05789 | .10409 | .13193 | .14247 | .14157 | .13493 | .12616 | .11707 | .10843 |
| .98628 | .94952 | .90160 | .85461 | .81553 | .78554 | .76321 | .74662 | .73417 | .72469 |
| .60 | .05859 | .10896 | .14466 | .16359 | .16868 | .16505 | .15709 | .14751 | .13775 |
| .98843 | .95599 | .90950 | .85913 | .81301 | .77510 | .74559 | .72305 | .70506 | .69263 |
| .70 | .05902 | .11214 | .15373 | .18014 | .19166 | .19201 | .18571 | .17625 | .16575 |
| .99001 | .96114 | .91723 | .86573 | .81464 | .76990 | .73553 | .70504 | .68299 | .66588 |
| .80 | .05930 | .11430 | .16033 | .19314 | .21102 | .21591 | .21193 | .20308 | .19214 |
| .99122 | .96532 | .92435 | .87307 | .81875 | .76031 | .72558 | .69125 | .66432 | .64330 |
| .90 | .05950 | .11584 | .16523 | .20340 | .22729 | .23703 | .23565 | .22799 | .21666 |
| .99217 | .96875 | .93055 | .88045 | .82427 | .76921 | .72065 | .68067 | .64690 | .62398 |
| 1.00 | .05964 | .11697 | .16695 | .21156 | .24100 | .25567 | .25766 | .25111 | .23997 |
| .99293 | .97159 | .93599 | .88754 | .83053 | .77182 | .71796 | .67255 | .63601 | .60723 |

$U/K + IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

K=SIN 60

| | 1/B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| .10 | .02672 | *.02127 | .01592 | *.01247 | *.01019 | *.00859 | *.00741 | *.00652 | *.00581 | *.00524 | |
| | .95568 | .94524 | .93848 | .93571 | .93434 | .93358 | .93311 | .93280 | .93258 | .93226 | |
| .20 | .04286 | *.05312 | .04849 | *.04168 | *.03575 | *.03093 | *.02723 | *.02421 | *.02177 | *.01975 | |
| | .97241 | .93093 | .90494 | .89070 | .88262 | .87774 | .87461 | .87249 | .87100 | .86991 | |
| .30 | .14829 | *.07394 | .07687 | *.07461 | *.06740 | *.06045 | *.05427 | *.04893 | *.04450 | *.04069 | |
| | .97926 | .93556 | .89551 | .86734 | .84886 | .825669 | .82446 | .82270 | .81655 | .81546 | |
| .40 | .05054 | *.08587 | .10167 | *.10358 | *.09871 | *.09143 | *.08395 | *.07692 | *.07063 | *.06508 | |
| | .98372 | .94368 | .89794 | .85900 | .82992 | .80914 | .79433 | .78363 | .77574 | .76979 | |
| .50 | .05165 | *.09286 | .11778 | *.12740 | *.12685 | *.12114 | *.11344 | *.10540 | *.09772 | *.09069 | |
| | .98662 | .95117 | .90473 | .85922 | .82124 | .79195 | .77005 | .75372 | .74143 | .73205 | |
| .60 | .05227 | *.09719 | .12907 | *.14619 | *.15109 | *.14821 | *.14137 | *.13300 | *.12438 | *.11613 | |
| | .98677 | .95736 | .91255 | .86382 | .81912 | .76213 | .75325 | .73105 | .71404 | .70091 | |
| .70 | .05266 | *.10001 | .13711 | *.16067 | *.17157 | *.17233 | *.16721 | *.15908 | *.14990 | *.14068 | |
| | .99030 | .96336 | .92009 | .87038 | .82203 | .77755 | .74198 | .71391 | .69206 | .67504 | |
| .80 | .05291 | *.10193 | .14295 | *.17236 | *.18876 | *.19377 | *.19085 | *.18344 | *.17400 | *.16393 | |
| | .99147 | .96641 | .92691 | .87762 | .82533 | .77649 | .73477 | .70098 | .67427 | .65331 | |
| .90 | .05309 | *.10330 | .14728 | *.18142 | *.2016 | *.21260 | *.21239 | *.20607 | *.19661 | *.18596 | |
| | .99240 | .96973 | .93293 | .88486 | .83097 | .77785 | .73057 | .69125 | .65973 | .63482 | |
| 1.00 | .05321 | *.10430 | .15056 | *.18661 | *.21524 | *.22917 | *.23197 | *.22705 | *.21777 | *.20656 | |
| | .99314 | .97249 | .93620 | .89179 | .83726 | .78085 | .72861 | .68393 | .64772 | .61890 | |

$U/K + IV/K^*$
 $U + IV = SN^{-1} (A + IB)$

$K = \sin 65$

| $1/A = .10$ | $1/A = .20$ | $1/A = .30$ | $1/A = .40$ | $1/\zeta = .50$ | $1/A = .60$ | $1/A = .70$ | $1/A = .80$ | $1/A = .90$ | $1/A = 1.00$ |
|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| .10 .96648 | .02385 .94650 | .01899 .93990 | .01421 .93719 | .01114 .93585 | .00910 .93510 | .00767 .93464 | .00652 .93434 | .00562 .93413 | .00519 .93396 |
| .20 .97306 | .03825 .93260 | .04743 .90715 | .04332 .89321 | .03725 .88530 | .03195 .86052 | .02771 .87745 | .02435 .87537 | .02165 .87391 | .01947 .87284 |
| .30 .97975 | .04310 .93711 | .06600 .89801 | .07046 .87046 | .06653 .85235 | .06031 .84041 | .05411 .83232 | .04860 .82666 | .04366 .82256 | .03646 .81956 |
| .40 .98410 | .04510 .94506 | .07663 .90046 | .09080 .86244 | .09261 .83397 | .08836 .81353 | .08197 .79932 | .07526 .78847 | .06912 .78069 | .06379 .77482 |
| .50 .98700 | .04609 .95238 | .06286 .90716 | .10514 .86282 | .11387 .82569 | .11355 .79698 | .10854 .77544 | .10182 .75933 | .09469 .74718 | .08786 .73780 |
| .60 .98904 | .04665 .95842 | .08671 .91484 | .11519 .86744 | .13n60 .82386 | .13520 .78771 | .13267 .75927 | .12696 .73736 | .11960 .72052 | .11198 .70749 |
| .70 .99053 | .04699 .96330 | .08922 .92222 | .12232 .87396 | .14365 .82597 | .15347 .78352 | .15453 .74859 | .15020 .72090 | .14317 .69925 | .13511 .68232 |
| .80 .99168 | .04722 .96726 | .09093 .92889 | .12750 .88111 | .15383 .83039 | .16875 .7828? | .17364 .74194 | .17145 .70663 | .16518 .68215 | .14819 .66127 |
| .90 .99258 | .04737 .97050 | .09214 .93477 | .13133 .88824 | .16184 .83608 | .18151 .78449 | .19042 .73628 | .18562 .69956 | .17753 .66830 | .16823 .64346 |
| 1.00 .99330 | .04748 .97318 | .09303 .93591 | .13424 .84238 | .16820 .89503 | .19219 .78775 | .20514 .73682 | .20832 .69295 | .19677 .65699 | .18709 .62622 |

$U/K+IV/K'$
 $U+IV=SN^{-1} (A+IB)$

K=SIN 70

| | 1/B | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------|
| .10 | .02121 .96710 | .01689 .94748 | .01264 .94099 | .00991 .93833 | .00609 .93702 | .00602 .93628 | .00589 .93583 | .00516 .93553 | .00462 .93533 | .00416 .93516 | |
| .20 | .03401 .97356 | .04218 .93385 | .03654 .90886 | .03315 .89515 | .02844 .88738 | .02467 .88267 | .02166 .87964 | .01928 .87760 | .01733 .87616 | .01573 .87511 | |
| .30 | .03831 .98013 | .05869 .93830 | .06269 .89994 | .05923 .87286 | .05372 .05504 | .04622 .04328 | .04332 .04351 | .03912 .02973 | .03555 .02577 | .03251 .02272 | |
| .40 | .04009 .98440 | .06813 .94611 | .08077 .90240 | .08245 .86505 | .07872 .83710 | .07308 .81701 | .06716 .80264 | .06160 .79222 | .05660 .78453 | .05218 .77672 | |
| .50 | .04097 .98721 | .07365 .95331 | .09349 .90902 | .10134 .86557 | .10117 .82912 | .09665 .80085 | .09089 .77959 | .08459 .76367 | .07853 .75164 | .07296 .74243 | |
| .60 | .04147 .96924 | .07707 .95924 | .10240 .91658 | .11619 .87021 | .12044 .82749 | .11852 .79195 | .11338 .76390 | .10693 .74224 | .10020 .72555 | .09370 .71261 | |
| .70 | .04177 .99071 | .07929 .95403 | .10872 .92384 | .12775 .87668 | .13666 .82973 | .13782 .78807 | .13417 .75366 | .12807 .72629 | .12100 .70481 | .11380 .68798 | |
| .80 | .04197 .99183 | .08081 .96790 | .11330 .93039 | .13676 .88375 | .15020 .83422 | .15482 .78763 | .15316 .74743 | .14781 .71452 | .14068 .68825 | .13296 .66747 | |
| .90 | .04211 .99271 | .08188 .97108 | .11669 .93616 | .14383 .89079 | .16149 .83993 | .16972 .78952 | .17040 .74416 | .16613 .70594 | .15918 .67493 | .15197 .65019 | |
| 1.00 | .04221 .99343 | .08267 .97371 | .11926 .94120 | .14544 .89747 | .17092 .84623 | .18276 .79296 | .18602 .74306 | .18311 .74306 | .17651 .69982 | .16813 .66416 | |

$U/K+IV/K'$
 -1
 $U+IV=SN \quad (A+IB)$

| K=SIN 80 | | | | | | | | | |
|----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 |
| .10 | .01607 .96187 | .01280 .94871 | .00958 .94237 | .00751 .93977 | .00614 .93848 | .00517 .93775 | .00446 .93732 | .00392 .93703 | .00350 .93683 |
| .20 | .02577 .97419 | .03198 .93542 | .02923 .91100 | .02516 .89759 | .02159 .66998 | .01872 .80537 | .01645 .88241 | .01464 .86041 | .01316 .87900 |
| .30 | .02903 .98060 | .04448 .93980 | .04755 .90235 | .04496 .87568 | .04080 .65643 | .03664 .84690 | .03293 .83908 | .02974 .83360 | .02703 .82954 |
| .40 | .03038 .98477 | .05162 .94744 | .06124 .90482 | .06258 .86840 | .05932 .84101 | .05552 .82131 | .05110 .80720 | .04690 .79695 | .04311 .78937 |
| .50 | .03105 .98755 | .05580 .95446 | .07007 .91134 | .07689 .85899 | .07686 .83339 | .0736d .80570 | .06922 .78482 | .06448 .76913 | .05990 .75727 |
| .60 | .03142 .98950 | .05339 .96026 | .07759 .91876 | .08812 .87364 | .09148 .83201 | .09017 .79724 | .08639 .76971 | .08157 .74837 | .07652 .73189 |
| .70 | .03165 .99093 | .06007 .96493 | .08236 .92586 | .09685 .88005 | .10375 .83439 | .10483 .79374 | .10225 .76001 | .09776 .73306 | .09250 .71183 |
| .80 | .03181 .99203 | .06121 .96871 | .08581 .93226 | .10363 .887n2 | .11338 .83895 | .11771 .79360 | .11671 .75428 | .11287 .72190 | .10763 .69593 |
| .90 | .03191 .99289 | .06202 .97181 | .08836 .93789 | .10895 .89392 | .12248 .84466 | .12898 .79573 | .12982 .75146 | .12689 .71392 | .12105 .68328 |
| 1.00 | .03199 .99358 | .06262 .97438 | .09030 .94281 | .11316 .90048 | .12956 .85094 | .13682 .79936 | .14168 .75078 | .13986 .70839 | .13518 .67316 |

$$J+IV = SN \quad (A+IB)$$

K=SIN 85

| | | 1/A = .10 | 1/A = .20 | 1/A = .30 | 1/A = .40 | 1/A = .50 | 1/A = .60 | 1/A = .70 | 1/A = .80 | 1/A = .90 | 1/A = 1.00 |
|------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------|
| .10 | .01308 .96806 | .01042 .94900 | .00780 .94270 | .00611 .94011 | .00499 .93884 | .00421 .93812 | .00363 .93768 | .00319 .93739 | .00285 .93719 | .00257 .93705 | |
| .20 | .02097 .97434 | .02602 .93579 | .02379 .91151 | .02047 .89816 | .01757 .89061 | .01524 .80602 | .01339 .80307 | .01191 .80108 | .01071 .87968 | .00972 .87865 | |
| .30 | .02362 .98071 | .03619 .94015 | .03869 .90292 | .03659 .87560 | .03321 .85924 | .02982 .84777 | .02681 .83998 | .02422 .83453 | .02201 .83059 | .02013 .82766 | |
| .40 | .02472 .98486 | .04290 .90510 | .04983 .86919 | .05093 .84195 | .04869 .82235 | .04525 .80829 | .04162 .79809 | .03819 .79054 | .03511 .78483 | .03239 .78483 | |
| .50 | .02526 .98762 | .04540 .95474 | .05766 .91189 | .06257 .86381 | .06257 .83441 | .05993 .80687 | .05638 .78607 | .05253 .77045 | .04881 .75862 | .04537 .74954 | |
| .60 | .02556 .98956 | .04750 .96050 | .06312 .91927 | .07171 .87446 | .07446 .63308 | .07342 .75851 | .07037 .77111 | .06647 .74985 | .06237 .73341 | .05838 .72063 | |
| .70 | .02575 .99098 | .04886 .96514 | .06700 .92634 | .07880 .88085 | .08444 .83550 | .08535 .79509 | .08329 .76153 | .07967 .73468 | .07540 .71352 | .07102 .69686 | |
| .80 | .02587 .99207 | .04979 .96890 | .06980 .93275 | .08431 .88779 | .09275 .84007 | .09544 .79502 | .09507 .75591 | .09199 .72367 | .08775 .69778 | .08309 .67719 | |
| .90 | .02596 .99293 | .05045 .97198 | .07186 .93830 | .08863 .89467 | .09666 .84580 | .10500 .79720 | .10575 .75319 | .10342 .71583 | .09936 .68528 | .09452 .66074 | |
| 1.00 | .02602 .99362 | .05094 .97454 | .07345 .94319 | .09205 .90119 | .10541 .85205 | .11299 .80087 | .11540 .75261 | .11399 .71043 | .10531 .67532 | .064685 | |

$$U + IV = SN \quad (A + IB)$$

K = SIN 86

| $1/A = .10$ | $1/A = .20$ | $1/A = .30$ | $1/A = .40$ | $1/A = .50$ | $1/A = .60$ | $1/A = .70$ | $1/A = .80$ | $1/A = .90$ | $1/A = 1.00$ |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| .10 | .01235 | .00984 | .00736 | .00517 | .00471 | .00397 | .00343 | .00269 | .00243 |
| | .95800 | .94904 | .94274 | .94015 | .93888 | .93816 | .93772 | .93723 | .93709 |
| .20 | .01980 | .02457 | .02246 | .01653 | .01659 | .01439 | .01264 | .01011 | .00118 |
| | .97437 | .93584 | .91157 | .89325 | .89068 | .86610 | .86315 | .86116 | .87874 |
| .30 | .02239 | .03417 | .03653 | .03455 | .03136 | .02816 | .02541 | .02287 | .02076 |
| | .98073 | .94120 | .90299 | .87178 | .85934 | .84767 | .84009 | .83464 | .83070 |
| .40 | .02334 | .03665 | .04705 | .04309 | .04598 | .04273 | .03930 | .03617 | .03058 |
| | .93487 | .94779 | .90547 | .86929 | .84206 | .82247 | .80642 | .79822 | .78497 |
| .50 | .02385 | .04286 | .05444 | .05908 | .05908 | .05665 | .05324 | .04960 | .04285 |
| | .95765 | .95477 | .91196 | .86991 | .83454 | .80705 | .78622 | .77060 | .75878 |
| .60 | .02414 | .04484 | .05960 | .06770 | .07032 | .06933 | .06645 | .06277 | .05890 |
| | .96957 | .96053 | .91335 | .87455 | .83321 | .79866 | .77127 | .75002 | .73359 |
| .70 | .02431 | .04613 | .06326 | .07440 | .07973 | .08060 | .07855 | .07523 | .07121 |
| | .95039 | .96517 | .92639 | .88095 | .83563 | .77352 | .76171 | .73487 | .71372 |
| .80 | .02443 | .04703 | .06590 | .07960 | .08758 | .07950 | .08978 | .08687 | .08287 |
| | .93208 | .96893 | .93275 | .88788 | .84021 | .79519 | .75610 | .72381 | .69880 |
| .90 | .02451 | .04764 | .06766 | .08368 | .09410 | .09515 | .09986 | .09766 | .08648 |
| | .99294 | .97200 | .93835 | .89475 | .84593 | .79738 | .75340 | .71605 | .68552 |
| 1.00 | .02457 | .04809 | .06934 | .08691 | .09952 | .10669 | .10897 | .10765 | .10412 |
| | .99363 | .97456 | .94323 | .90127 | .85218 | .80105 | .75283 | .71067 | .67556 |

$U/K + IV/K$
 -1
 $U+IV=SH \quad (A+IB)$

K=SIN 87

| $1/A$ | $1/A = .10$ | $1/A = .20$ | $1/A = .30$ | $1/A = .40$ | $1/A = .50$ | $1/A = .60$ | $1/A = .70$ | $1/A = .80$ | $1/A = .90$ | $1/A = 1.00$ |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| | .01152 | .00916 | .00687 | .00530 | .00440 | .00371 | .00320 | .00281 | .00251 | .00226 |
| | .96809 | .94906 | .94277 | .94019 | .93991 | .93619 | .93776 | .93747 | .93727 | .93712 |
| .20 | .01647 | .02292 | .02055 | .01804 | .01548 | .01343 | .01180 | .01050 | .00944 | .00856 |
| | .97437 | .93587 | .91162 | .89830 | .89074 | .88626 | .88321 | .88122 | .87982 | .87860 |
| .30 | .02081 | .03166 | .03109 | .03224 | .02926 | .02628 | .02352 | .02134 | .01939 | .01774 |
| | .98074 | .94023 | .90305 | .87675 | .85941 | .84795 | .84017 | .83477 | .83079 | .82787 |
| .40 | .02117 | .03706 | .04390 | .04487 | .04250 | .03987 | .03667 | .03366 | .03034 | .02854 |
| | .98488 | .94762 | .90552 | .86336 | .84215 | .82257 | .80853 | .79833 | .79078 | .78508 |
| .50 | .02225 | .04000 | .05080 | .05513 | .05513 | .05287 | .04968 | .04629 | .04301 | .03999 |
| | .98764 | .95480 | .91201 | .86999 | .83463 | .80711 | .78634 | .77773 | .75890 | .74984 |
| .60 | .02252 | .04117 | .05561 | .06310 | .06561 | .06470 | .06201 | .05858 | .05496 | .05146 |
| | .98957 | .96467 | .91935 | .87453 | .83331 | .79675 | .77140 | .75016 | .73373 | .72036 |
| .70 | .02269 | .04305 | .05902 | .06942 | .07440 | .07521 | .07340 | .07021 | .06646 | .06260 |
| | .99100 | .96519 | .92944 | .88102 | .83573 | .79537 | .76185 | .73502 | .71387 | .69723 |
| .80 | .02280 | .04387 | .06149 | .07423 | .08172 | .08445 | .08370 | .08107 | .07735 | .07324 |
| | .99208 | .96895 | .93279 | .88795 | .84031 | .79532 | .75625 | .72404 | .69817 | .67756 |
| .90 | .02287 | .04445 | .06332 | .07808 | .08780 | .09252 | .09319 | .09115 | .08756 | .08333 |
| | .99294 | .97202 | .93639 | .89462 | .84604 | .79751 | .75356 | .71523 | .68570 | .66117 |
| 1.00 | .02292 | .04487 | .06470 | .08109 | .09287 | .09956 | .10169 | .10046 | .09717 | .09283 |
| | .99363 | .97457 | .94327 | .90133 | .85229 | .80119 | .75300 | .71066 | .67578 | .64737 |

| | | K=SIN 66 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|--------|----------|--------|--------|----------|--------|--------|----------|--------|--------|----------|--------|--------|----------|--------|--------|----------|----------|---------|----------|---------|---------|----------|---------|----------|----------|----------|----------|----------|--------|--------|
| | | 1/A= .10 | | | 1/A= .20 | | | 1/A= .30 | | | 1/A= .40 | | | 1/A= .50 | | | 1/A= .60 | | | 1/A= .70 | | | 1/A= .80 | | | 1/A= .90 | | | | | |
| .10 | .96811 | .01053 | .00839 | .00626 | .00492 | .00492 | .00492 | .00339 | .00293 | .00257 | .00229 | .00207 | .00171 | .00149 | .00149 | .00149 | .00127 | .000959 | .00063 | .00029 | .00027 | .00027 | .00027 | .00027 | .00027 | .00027 | .00027 | | | | |
| .20 | .97736 | .01689 | .02096 | .02096 | .01916 | .01649 | .01415 | .01227 | .01079 | .00959 | .00863 | .00783 | .00715 | .00649 | .00595 | .00595 | .00595 | .00526 | .00423 | .00326 | .00227 | .00177 | .00127 | .000797 | .0003729 | .0003729 | .0003729 | .0003729 | | | |
| .30 | .98075 | .0152 | .02291 | .02291 | .03116 | .02947 | .02675 | .02402 | .02159 | .01951 | .01773 | .01622 | .01491 | .01347 | .01202 | .01051 | .00842 | .0063478 | .004801 | .003478 | .002305 | .001773 | .00127 | .000793 | .0003805 | .0003805 | .0003805 | .0003805 | | | |
| .40 | .98489 | .01990 | .02382 | .02382 | .04013 | .04102 | .03922 | .03645 | .03352 | .03077 | .02829 | .02609 | .02401 | .02182 | .01951 | .01717 | .01480 | .01227 | .00959 | .00715 | .00526 | .003729 | .00227 | .00177 | .00127 | .000797 | .0003729 | .0003729 | .0003729 | | |
| .50 | .98764 | .02044 | .03656 | .03656 | .04643 | .05040 | .05040 | .04833 | .04542 | .04232 | .03932 | .03656 | .03462 | .03263 | .03060 | .02856 | .02642 | .02432 | .02222 | .01951 | .01622 | .01347 | .01051 | .00793 | .00526 | .003729 | .00227 | .00177 | .00127 | | |
| .60 | .98956 | .02059 | .03625 | .03625 | .05053 | .05775 | .05997 | .05914 | .05669 | .05355 | .05025 | .04704 | .04491 | .04288 | .04086 | .03883 | .03680 | .03386 | .03083 | .02780 | .02477 | .02166 | .01853 | .01540 | .01227 | .00914 | .00601 | .003729 | .00227 | .00177 | |
| .70 | .99100 | .02074 | .03935 | .03935 | .05395 | .06346 | .06801 | .06875 | .06710 | .06419 | .06076 | .05723 | .05410 | .05105 | .04800 | .04505 | .04200 | .03905 | .03505 | .03105 | .02705 | .02302 | .01901 | .01500 | .01199 | .00898 | .00597 | .00296 | .00195 | .00127 | |
| .80 | .99209 | .02084 | .04010 | .04010 | .05621 | .06790 | .07479 | .07720 | .07659 | .07412 | .07071 | .06761 | .06458 | .06151 | .05851 | .05551 | .05251 | .04951 | .04651 | .04351 | .04051 | .03751 | .03451 | .03151 | .02851 | .02551 | .02251 | .01951 | .01651 | .01351 | .01051 |
| .90 | .99294 | .02091 | .04163 | .04163 | .05788 | .07137 | .08026 | .08458 | .08519 | .08635 | .08007 | .07683 | .07371 | .07061 | .06751 | .06441 | .06131 | .05821 | .05511 | .05201 | .04891 | .04581 | .04271 | .03961 | .03651 | .03341 | .03031 | .02721 | .02411 | .02101 | .01791 |
| 1.00 | .99363 | .02096 | .04102 | .04102 | .05915 | .07412 | .08489 | .09185 | .09296 | .09185 | .08884 | .08480 | .08175 | .07871 | .07561 | .07251 | .06941 | .06631 | .06321 | .06011 | .05701 | .05391 | .05081 | .04771 | .04461 | .04151 | .03841 | .03531 | .03221 | .02911 | .02601 |

$U/K+IV/K'$
 $-I$
 $U+IV=SN$ (A, IB)

K=SIN 89

| $1/A = .10$ | $1/A = .20$ | $1/A = .30$ | $1/A = .40$ | $1/A = .50$ | $1/A = .60$ | $1/A = .70$ | $1/A = .80$ | $1/A = .90$ | $1/A = 1.00$ |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| .10 | .00919 | .00732 | .00546 | .00429 | .00351 | .00266 | .00224 | .00200 | .00180 |
| | .94909 | .94280 | .94022 | .93895 | .93623 | .93750 | .93731 | .93716 | |
| .20 | .01473 | .01628 | .01671 | .01436 | .01234 | .01011 | .00837 | .00752 | .00683 |
| | .97436 | .93591 | .91167 | .89637 | .89080 | .88623 | .88129 | .87983 | .87887 |
| .30 | .01659 | .02542 | .02718 | .02570 | .02333 | .02095 | .01883 | .01701 | .01415 |
| | .98075 | .94027 | .90311 | .87683 | .85950 | .84804 | .84027 | .83482 | .82797 |
| .40 | .01736 | .02950 | .03500 | .03578 | .03421 | .03171 | .02924 | .02664 | .02276 |
| | .98489 | .94785 | .90559 | .86944 | .84225 | .82267 | .80664 | .79845 | .78521 |
| .50 | .01774 | .03189 | .04050 | .04396 | .04396 | .04215 | .03962 | .03691 | .03430 |
| | .98764 | .95483 | .91207 | .87607 | .83474 | .80723 | .78647 | .77086 | .75905 |
| .60 | .01756 | .03236 | .04434 | .05037 | .05231 | .05159 | .04945 | .04671 | .04104 |
| | .98956 | .96058 | .91944 | .87471 | .83342 | .79891 | .77155 | .75389 | .72112 |
| .70 | .01609 | .03132 | .04706 | .05535 | .05932 | .05997 | .05853 | .05599 | .05300 |
| | .99100 | .96521 | .92669 | .88110 | .83685 | .79551 | .76261 | .73519 | .69741 |
| .80 | .01816 | .03498 | .04503 | .05922 | .06518 | .06734 | .06681 | .06461 | .05841 |
| | .99209 | .96897 | .93204 | .88904 | .84043 | .79547 | .75642 | .72422 | .67776 |
| .90 | .01824 | .03544 | .05049 | .06226 | .07001 | .07377 | .07231 | .07259 | .06646 |
| | .99294 | .97204 | .93843 | .89490 | .84615 | .79767 | .75374 | .71643 | .68591 |
| 1.00 | .01828 | .03578 | .05159 | .065 | .07404 | .07938 | .08109 | .08012 | .07750 |
| | .99363 | .97459 | .94331 | .90141 | .85240 | .80135 | .75319 | .71106 | .64755 |